NOTICE

All drawings located at the end of the document.

Tomorrow's Nuclear Cleanup Today

RMRS

Rocky Flats Environmental Technology Site

Radiological and Non-Radiological Characterization Package for the Building 707 Cluster

November 1999

Revision 0

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Date

Approved by

11/15/99

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Date

Reviewed for Classification/UCNI/OUO
By: Janet Nesheim, Derivative Classifier
DOE, EMCBC
Date: 10-09-08
Confirmed Unclassified, Not UCNI/Not OUO

V 257

Survey Area: 707 Cluster	Survey Unit: N/A	Building N/A
Survey Unit Description Characterization Package for B-707 Cluster		

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Survey Area: 707 Cluster	Survey Unit: N/A	Building N/A

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Survey Area: 707 Cluster	Survey Unit: N/A	Building N/A
Survey Unit Description Characterization Package for B-707 Cluster		

Characterization Package Summary:

The B-707 cluster consists of Buildings 707, 708, 711, 711A, 718, 731, 707T, 707S, and Tanks 16, 206, 208-223, 284, 290, 324, and 325

The characterization strategy for the B-707 cluster buildings for radiological and non-radiological contaminants is based upon the draft *Reconnaissance Level Characterization Plan*, including the Data Quality Objectives (DQOs) The DQOs used to implement this strategy are presented below (following this summary) The DQO process was used to evaluate existing information and data and to determine additional characterization requirements needed to define building hazards (radiological, chemical and safety) per Attachment 9 of RFCA and to initially identify anticipated waste streams All quality assurance requirements presented in MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol* (DDCP) will be followed

Existing data on radiological and non-radiological hazards associated with structures in the B-707 cluster are insufficient to address the applicable DQO decision rules In most cases, radiological surveys were carried out only in certain areas and below 6 feet Also, data generally address only removable contamination, and do not address fixed contamination throughout the structures Likewise, limited data exist for non-radiological hazards such as beryllium and asbestos, and no data exist for penetration of RCRA metals into concrete

Based upon historical and process knowledge, the radiological contaminants of concern for the purposes of surveys and sampling were determined to be uranium, plutonium, and americium The non-radiological contaminants of concern for the purposes of sampling were determined to be RCRA metals, beryllium, PCBs, and asbestos The total surveys and samples to be taken are summarized in Table 1

Radiological Characterization

Extensive radiological surveys for fixed and removable contamination will be conducted on walls, floors, ceilings, fixed equipment, overhead items (e g , process lines, conduit, lighting), and above false ceilings Additionally, because process knowledge and history reveal that contamination was routinely painted over, paint chip samples will be taken at biased locations and analyzed for isotopic contaminants Sludge from the bottom of the B-711 Cooling Tower will also be collected and analyzed Radiological measurements and samples will be collected per 3-PRO-165-RSP 07 02, *Contamination Monitoring Requirements*, and 3-PRO-165-RSP-16 03, *Radiological Sampling of Building Media*

Non-Radiological Characterization

While RCRA volatile organics were used routinely in some of the cluster buildings, history and process knowledge reveal no spills of magnitude sufficient to saturate concrete and remain detectable at this time, given the vapor pressure of these substances Additionally, carbon tetrachloride and perchloroethylene were handled mainly in gloveboxes RCRA volatile organics contained in process lines and tanks will not be characterized as part of reconnaissance level characterization, but will be documented in the Reconnaissance Level Characterization Report (RLCR) based upon historical and process knowledge

Biased samples of concrete into which the Kathabar dehumidifying system leaked Kathene fluid potentially contaminated with metals (particularly chromium, cadmium, and lead) will be analyzed for RCRA metals Additionally, a small number of randomly located concrete floor samples will be analyzed for RCRA metals in order to determine whether contamination spread beyond visible areas of staining A few small rooms or areas constituting RCRA permitted unit 707 1 are located in B-707 and could contain some contamination These areas will not be sampled under reconnaissance level characterization They will be addressed during RCRA

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closure The administrative records for these units and potential related hazards will be documented in the RLCR

Biased samples of wood slats and sediment from the B-711 Cooling Tower will be analyzed for RCRA metals due to the potential use of chromium-based fungicide in the unit

Beryllium use was extensive in several modules of B-707, and review of sampling conducted by the Chronic Beryllium Disease Prevention Program revealed data gaps Smear sampling is planned in several areas on horizontal surfaces, fixed equipment, ductwork, overhead items, and above drop ceilings, in order to fill data gaps

Examination of records of analyses of lead and PCBs in paint revealed data gaps However, these data are not strictly required for waste characterization, as stated in Environmental / Waste Compliance Guidance No 27, *Lead Based Paint (LBP) and LBP Debris Disposal*, and Environmental / Waste Compliance Guidance No 25, *Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition* Furthermore, sampling of building debris *after* demolition is expected to be carried out Also, because extensive scabbling of floors (e g , hydrolazing) can reasonably be expected to occur during decontamination and decommissioning of B-707, it is expected that radiological concerns will supercede those posed by lead or PCBs in determining respiratory protection and other IH&S requirements Additionally, due to the large number of layers of paint and the extreme variability of paint from area to area, limited sampling will not be sufficient to allow IH&S to rule out the presence of lead and PCB in paint during scabbling operations Therefore, in the instance of the B-707 cluster, characterization of lead and PCBs in paint is not considered to be cost-effective at the reconnaissance level and will not be conducted

The buildings contain flourescent light ballasts that contain PCBs These need not be sampled, as stated in Environmental / Waste Compliance Guidance No 27, *Management of Fluorescent Light Ballasts*, but must be disposed of during stripout as described in that guidance document

Examination of asbestos inspection records revealed data gaps Asbestos inspection and sampling (where necessary) will be conducted in all the buildings in the cluster

Non-radiological sampling and analyses are as per PRO-563-ACPR, *Asbestos Characterization Procedure*, PRO-536-BCPR, *Beryllium Characterization Procedure*, PRO-488-BLCR, *Bulk Solids and Liquids Characterization Procedure*, and PRO-487-MPCR, *Metals and PCB Characterization Procedure*

Sample or Survey Type	Number of Samples or Surveys
Radiological smears (removable contamination)	5198
Radiological surveys (fixed contamination)	5198
Radiological scans (fixed contamination)	2654
Beryllium smears	71
Concrete cores (RCRA metals)	13
Paint chip samples (isotopics)	49
Sludge samples (isotopics)	5
Sludge samples (RCRA metals)	5
Wood chip samples (RCRA metals)	4
Asbestos samples	47

Table 1 Total samples and surveys to be taken for characterization of theB-707 cluster

Survey Area: 707 Cluster	Survey Unit: N/A	Building N/A
Survey Unit Description Characterization Package for B-707 Cluster		

Data Quality Objectives:

This section defines the DQOs for reconnaissance level characterization (RLC) of the B-707 cluster buildings and structures

1 The Problem

The problem involves characterizing the nature and extent of radiological, chemical and safety hazards in the B-707 cluster buildings and structures in order to 1) initially evaluate methods of disposition, 2) estimate approximate volumes of sanitary, low-level (LLW), low-level mixed, transuranic (TRU), transuranic-mixed, TSCA, asbestos, and RCRA waste generated during the decommissioning process, and 3) provide input to the design of in-process and pre-demolition (final) survey characterization

2 The Decision

The critical decision is estimating the inventories of the different waste categories that will be generated during decommissioning of the B-707 cluster buildings and structures Characterization data evaluation will involve assessing if enough validated data exist to adequately describe the nature and extent of contamination or if additional data are necessary

3. Inputs to the Decision

The inputs to the decision include the RLC data and information generated from previous characterization activities (e g , scoping characterization, etc), as well as the applicable unrestricted release criteria, and transportation and waste management regulations

RLC data to be collected include

- radiological survey/scan measurements of all buildings and structures,
- isotopic concentrations of paint chips from floors of selected buildings,
- RCRA metals TCLP concentrations from core samples of concrete floors in B-707,
- beryllium concentrations from smears in selected areas of B-707, and
- asbestos inspection and sampling results

4 Decision Boundaries

The decision boundaries include the spatial confines of the survey areas within the B-707 cluster buildings and structures as described in detail in this Characterization Package

5 Decision Rules

Radionuclides

If process knowledge/history supports the premise that no radioactive contamination is present, the related area and/or volume of material is considered sanitary waste and may be free-released

If all radiological survey/scan measurements are below the surface contamination thresholds provided in DOE Order 5400 5 (Radiation Protection of the Public and Environment) and the RFETS Radiological Control Manual, the related area or volume of material is considered sanitary waste and may be free-released

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Survey Area: 707 Cluster	Survey Unit: N/A	Building N/A

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If all radiological sample measurements are below the volume contamination thresholds provided in the No-Rad-Added Verification (NRA) Program, the related volume of material is considered sanitary waste and may be free-released

If any radiological survey/scan measurement exceeds the surface contamination thresholds provided in DOE Order 5400 5, the related area or volume of material must be remediated or dispositioned as radiological or mixed waste

If any radiological sample measurement exceeds the volume contamination thresholds provided in the NRA Program, the related volume of material must be remediated or dispositioned as radiological or mixed waste

If any radiological sample measurement (or disposal unit volume) exceeds 100 nanocuries per gram of transuranic material, the associated volume must be disposed of as transuranic (TRU) waste

Hazardous Waste

If the waste is mixed with or contains a listed hazardous waste, or if the waste exhibits a characteristic of a hazardous waste, then the waste is considered hazardous waste in accordance with 6 CCR 1007-3, Parts 261 and 268

Hazardous Substances

If the material/media contain a listed hazardous substance above a decision document action level and/or the CERCLA reportable quantity (40 CFR 302 4), remediate or notify the receiving waste disposal facility of the hazardous substance and the estimated quantity prior to shipment

Beryllium

If surface concentrations of beryllium are equal to or greater than 0 2 ug/100 cm^2, the material is considered beryllium contaminated per the Occupational Safety and Industrial Hygiene Program Manual, Chapter 28, Chronic Beryllium Disease Prevention Program If the concentrations are below 0 2 ug/100 cm^2, the material is considered non-beryllium contaminated

If detectable beryllium contamination can be shown through process knowledge to consist of beryllium powder (P015 under RCRA), then the material is considered RCRA waste and subject to treatment standards under 40 CFR 268 40

PCBs

Material/media potentially contaminated with PCBs will be categorized per 40 CFR 761 If material meets the definition of PCB Bulk Product Waste, it may be disposed of at a facility that is permitted, licensed, or registered by a State to manage municipal solid waste subject to 40 CFR 258, or non-municipal, non-hazardous waste subject to 40 CFR 257 5 through 257 30 For most bulk product wastes, implementing this strategy precludes the need for PCB characterization prior to or during facility disposition, as long as restrictions outlined in 40 CFR 761 62 regarding their disposal are met However, notification to the disposal facility is required at least 15 days in advance of shipping wastes to the facility if that disposal facility does not possess a commercial PCB storage or disposal approval

Management strategy for PCB remediation waste will be determined on a case-by-case basis If PCB contamination is suspected, or if a PCB spill is discovered that has not been cleaned up, the area will be treated as directed by the most recent versions of 40 CFR 761 through 766, the RFETS Polychlorinated Biphenyls Management Plan (PRO-673-EWQA-1 5), and the WSRIC standards For each planned cleanup,

PCB regulations under TSCA will be evaluated as potentially applicable or relevant and appropriate requirements (ARARs), including the disposal options for PCB remediation waste listed under 40 CFR 761 61

Asbestos

In accordance with 40 CFR 763 and 5 CCR 1001-10, if any one sample of a sample set representing a homogeneous medium results in a positive detection (i e , >1% by volume), then material is considered ACM, otherwise the material is considered non-ACM

6 Tolerable Limits on Decision Errors

Acceptable false positive and negative errors generally range from 1% to 10% Other limits may be used, if agreed to by the D&D Projects and Construction Organization, the Project Manager, DOE and the LRA Decision error does not apply to asbestos sample sets per 40 CFR 763 Results are compared with the action levels on a sample-by-sample basis

Sampling design error for radiological sampling will be controlled by requiring a minimum number of uniformly distributed (n=30) and biased surveys (n=10) to be performed in each survey area In addition, surface area size limits are assigned for survey areas based on contamination potential

7 Optimization of Plan Design

The following criteria provide potential areas for optimization of the RLCP

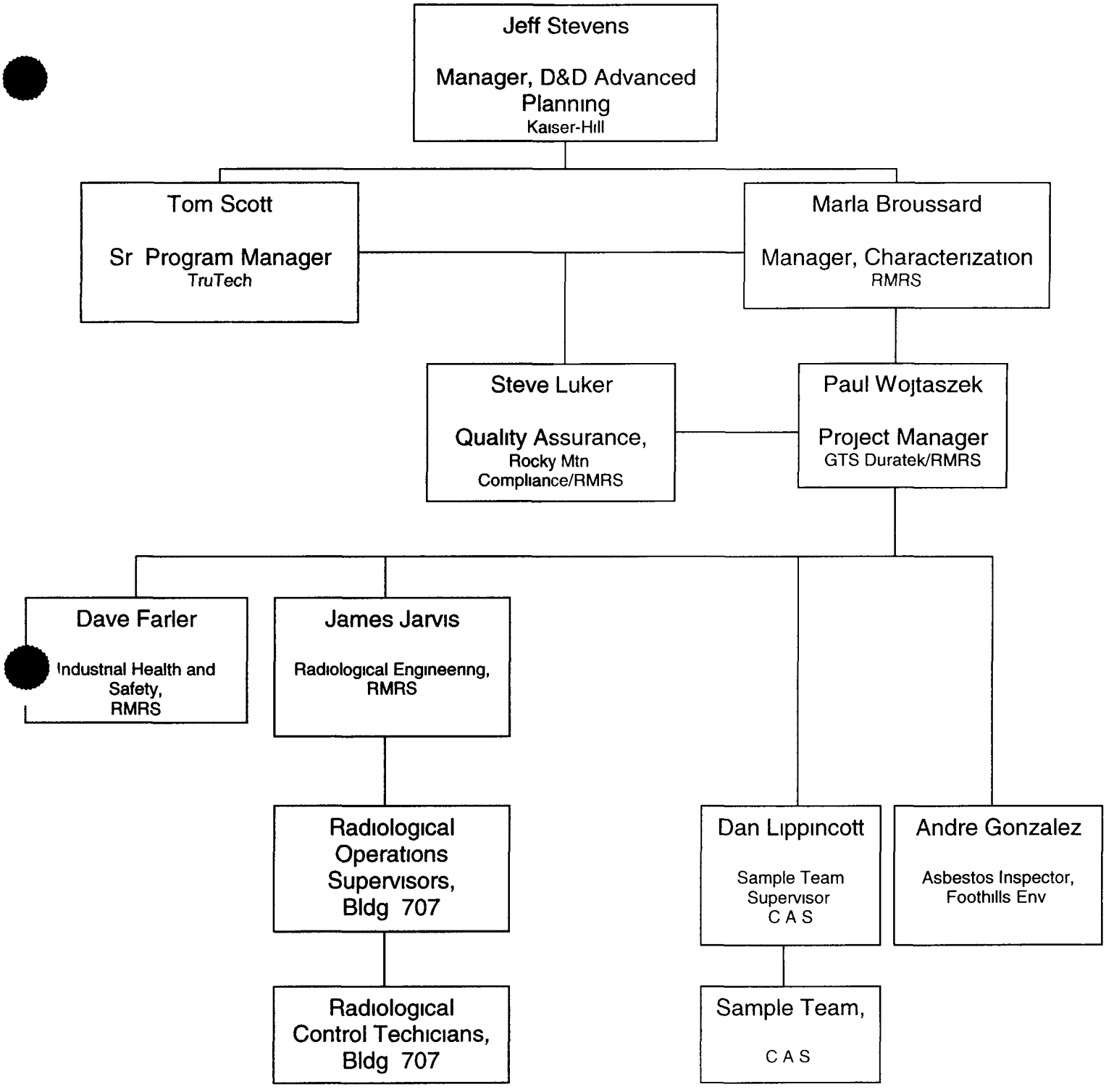
- If additional data (radiological, RCRA, TSCA, and asbestos) are not required to make decisions, then RLC surveys/sampling are not required
- If RCRA, TSCA or asbestos survey/samples are required for materials, media, equipment and interior and exterior building surfaces, refer to the DDCP, Section 6 0

If radiological survey/samples are required for materials, media, equipment and interior and exterior building surfaces, then the following requirements apply

- A minimum number of uniformly distributed and biased measurements (refer to Appendix A) must be collected
- A minimum number of biased samples must be collected (if surface media or volumetric contamination are suspect)

Radiological field measurement methods and instrumentation will be performed in accordance with approved RFETS site procedures and this document

Radiological sampling and preparation for laboratory measurements will be performed in accordance with approved RFETS site procedures and this document



Organizational Chart

Characterization of B-707 Cluster Buildings

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Non-Radiological Characterization Instruction

Bldg. 707 Cluster

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Survey Area: 707 Cluster	Survey Unit. N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building 707

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos, Beryllium, RCRA Metals, PCBs**

Special Support Requirements

Ladder, scaffolding, or man-lift Media samplers to take paint and concrete core samples from floors IH technicians to take beryllium smear samples CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

Paul A Wojtaszek	[redacted]	Paul A Wojtaszek	11/15/99
Preparer Printed Name	Employee #	Preparer Signature	Date
James H. Moore	[redacted]	J H Moore	11/15/99
Quality Assurance Reviewer Printed Name	Employee #	Quality Assurance Reviewer Signature	Date

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Survey Area: 707 Cluster	Survey Unit: N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	25 media samples including thermal systems insulation on first and second floor, surfacing materials, and floor tile/mastic **SEE NOTES 1 and 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling and analysis **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure,* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

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Survey Area: 707 Cluster	Survey Unit: N/A	Building
Survey Unit Description Characterization Package for B-707 Cluster		

Smear samples for beryllium analysis	Total of 71 smears (64 samples plus 7 duplicates) to be collected as follows (**SEE NOTES 1 AND 2**) First floor 3 smears each at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface) of Modules A, B, C, D, E, F, G, H, J and K (*i e*, above drop ceiling or above 2 meters if no drop ceiling) These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples (Total 33 samples) 1 smear *inside* each of 6 internal return ducts (i e, remove grille and smear inside duct) of Zone 2 HVAC systems serving Modules F, G, and H (collect 1 field duplicate immediately adjacent to one of these samples), 2 smears on horizontal surfaces (excluding floor) in Room 125 A, Module F, 2 smears on horizontal surfaces (excluding floor) in Room 125B, Module F, 1 smear in each of 5 hoods in Module G (collect 1 field duplicate immediately adjacent to one of these samples), 1 smear each from internal areas of 2 pressure chambers in Module G, Room 131A, 1 smear each from internal areas of 3 autoclaves in Module H, 2 smears on horizontal surfaces (excluding floor) in Room 135C, Module H (collect 1 field duplicate immediately adjacent to one of these samples), 2 smears on horizontal surfaces (excluding floor) in Room 136, Module H (collect 1 field duplicate immediately adjacent to one of these samples), Second floor 2 smears each on or near plenums 101 and 103, Room 200, 2 smears each on or near plenums 107 and 108, Room 220, 2 smears on or near plenum 102, Room 240 **SEE NOTES 1 AND 2** 7 of 466	Sampler **SHALL** be an **industrial hygiene representative**, Sampling and analysis **SHALL** be performed according to PRO-536-BCPR, *Beryllium Characterization Procedure*

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707

Survey Unit Description
Characterization Package for B-707 Cluster

Bulk concrete samples for RCRA metals analysis	Total of 13 bulk samples (11 samples plus 2 duplicates) to be collected as follows 4 bulk samples plus a duplicate, using either a coring tool or chisel, at biased locations of leaking Kathabar system on 2nd floor, 4 bulk samples plus a duplicate at random locations on first floor (see *Concrete Core Sampling Maps and Grids for Locating Random ampling Locations*, attached), if locations given in the sampling map are inaccessible, replacement coordinates will be generated by the Project Manager using the attached grid and random number list 3 bulk samples at random locations on second floor (see *Concrete Core Sampling Maps and Grids for Locating Random ampling Locations*, attached), if locations given in the sampling map are inaccessible, replacement coordinates will be generated by the Project Manager using the attached grid and random number list **Paint must be scraped off and removed from surface before bulk sample is taken to avoid contamination of concrete sample by components of paint,** **SEE NOTES 1, 2, 3, 4, and 5**	Sampling and analysis **SHALL** be performed according to PRO-488-BLCR, *Bulk Solids and Liquids Characterization Procedure*, Samples will be analyzed for TCLP metals (RCRA codes D004-D011) pursuant to ASD standards by EPA SW-846 Method 1311, "Toxicity Characteristic Leaching Procedure "

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Survey Area: 707 Cluster	Survey Unit. N/A	Building 707

Survey Unit Description
Characterization Package for B-707 Cluster

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

NOTE 3 The structural integrity of the concrete into which leaking Kathene solution penetrated has been compromised by the corrosive effect of the solution on concrete Building engineering must evaluate the area before samples are taken Consult engineering calculation #CALC-776-NA-000060, *Inspection / Evaluation of Kathene Damaged Reinforced Concrete Floor*, for results of evaluation of similar area in B-776

NOTE 4 Rebar and utility location must be conducted by building enginering prior to drilling

NOTE 5 Where locations for sampling are in an area that requires intact concrete and paint covering as part of secondary containment, sample locations will be filled and repainted as per building management instructions and according to building work instructions and procedures

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Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit. N/A	Building 707

Survey Unit Description
Characterization Package for B-707 Cluster

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

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Survey Area: 707 Cluster	Survey Unit: N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

BERYLLIUM SMEAR SAMPLING MAPS

AND SAMPLE LOG SHEET

B-707

Survey Area: 707 Cluster	Survey Unit N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

Beryllium Sample Log

NAME _____ LABORATORY _____
EMPLOYEE #_____ DATE OF ANALYSIS _____
DATE _____ SAMPLE PREFIX_____

Sample Sequence Number	Bldg and Room Number	Description	Random or Judgment	Area sampled (cm^2)	µg/ sample

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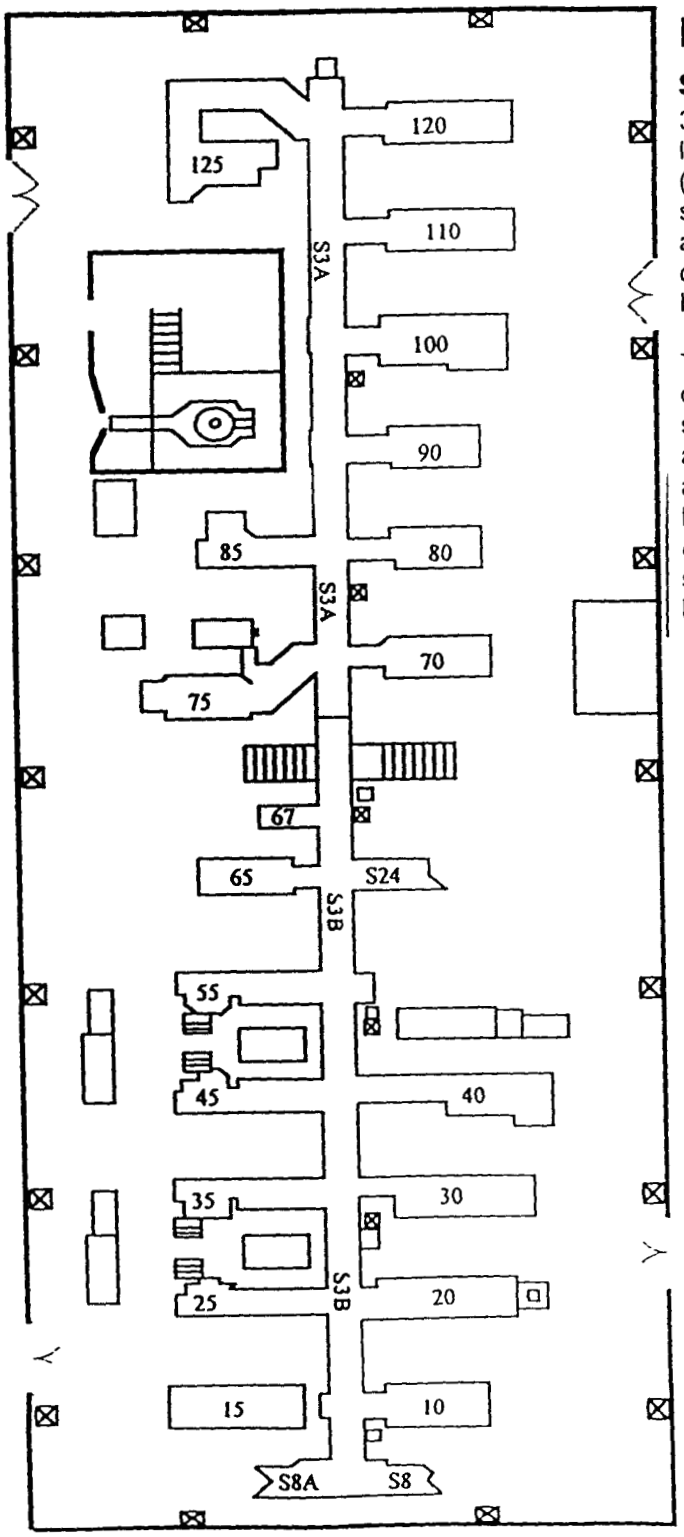
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points

MODULE A



Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

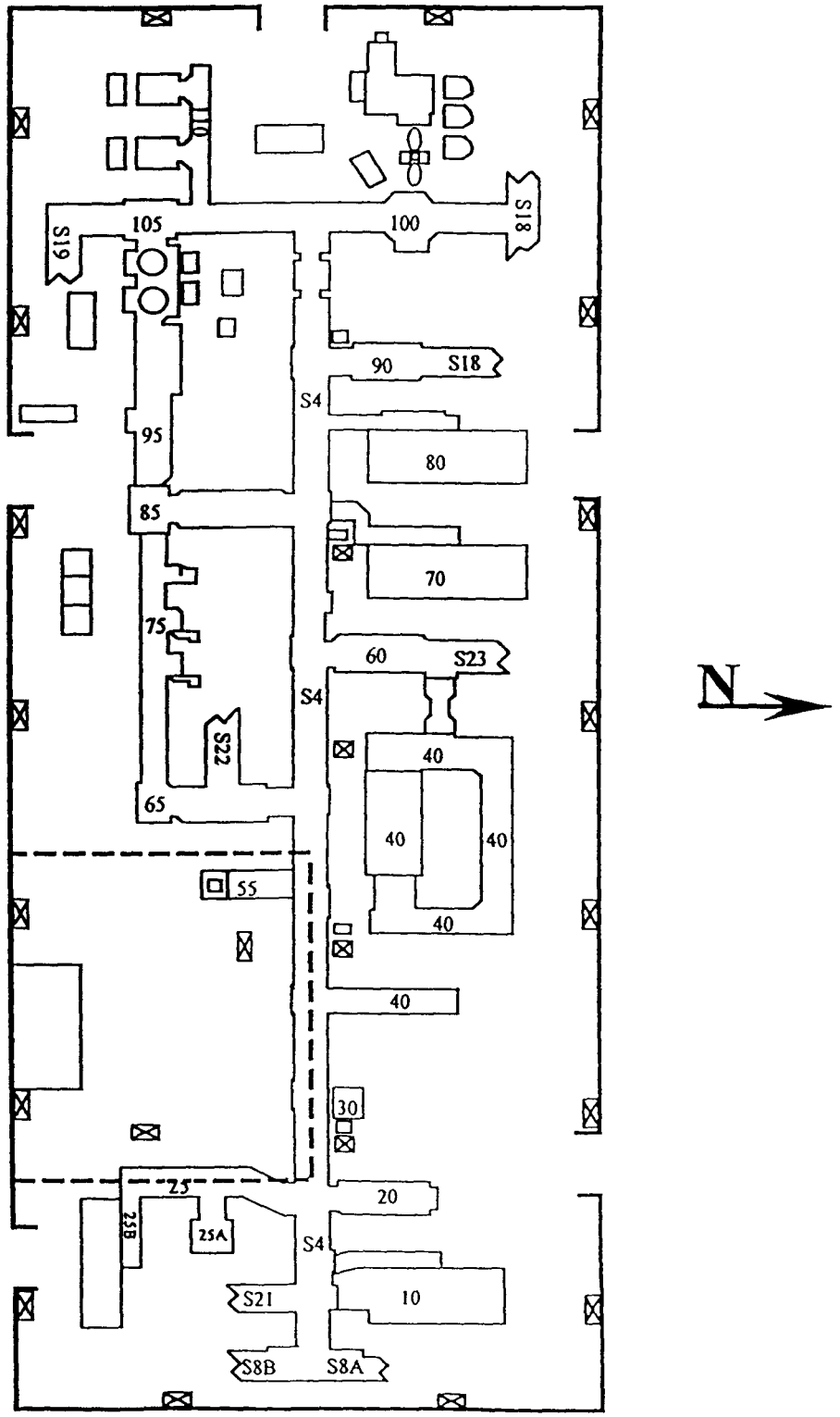
Drawing Showing Survey Points

MODULE B

Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples



— — Temporary Walls

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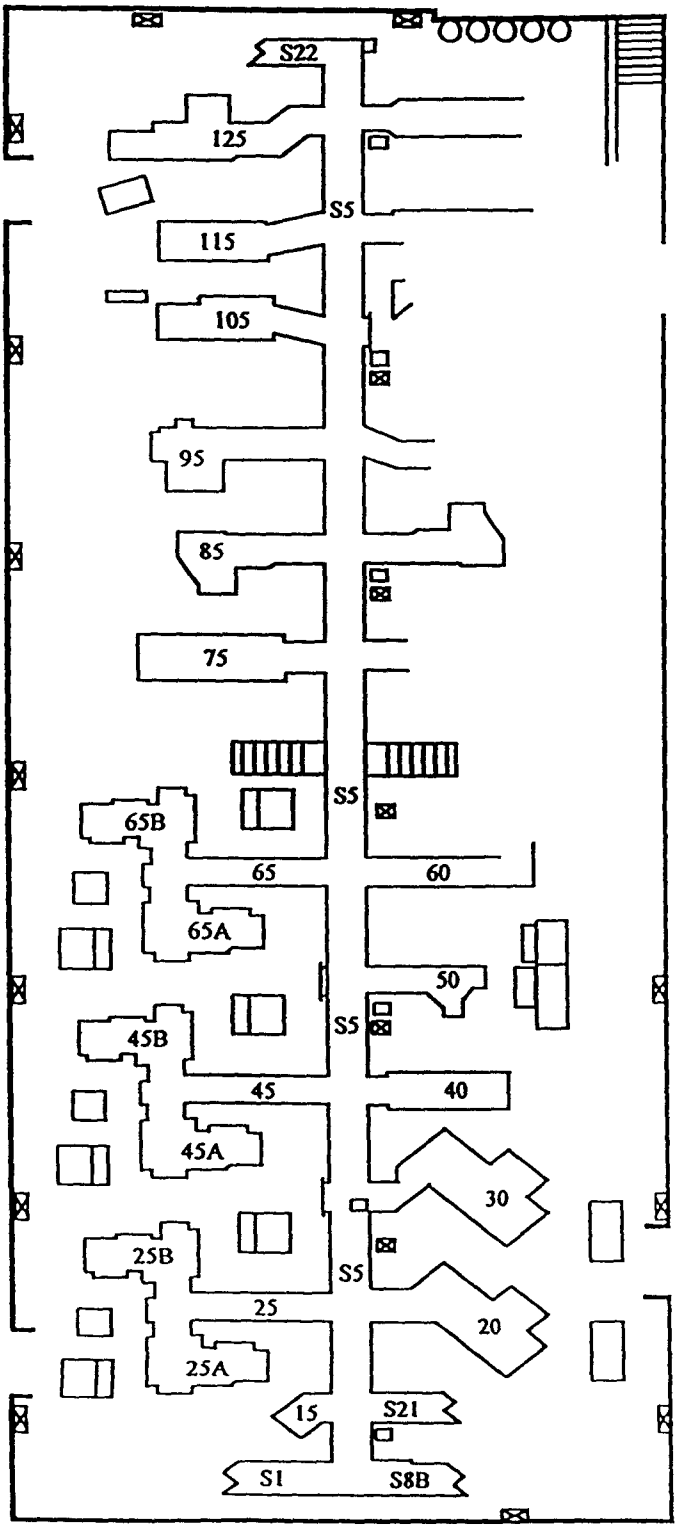
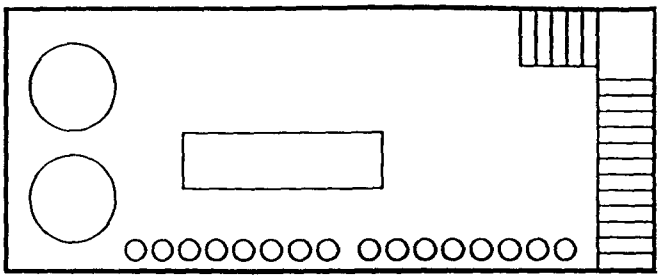
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points

MODULE C





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Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

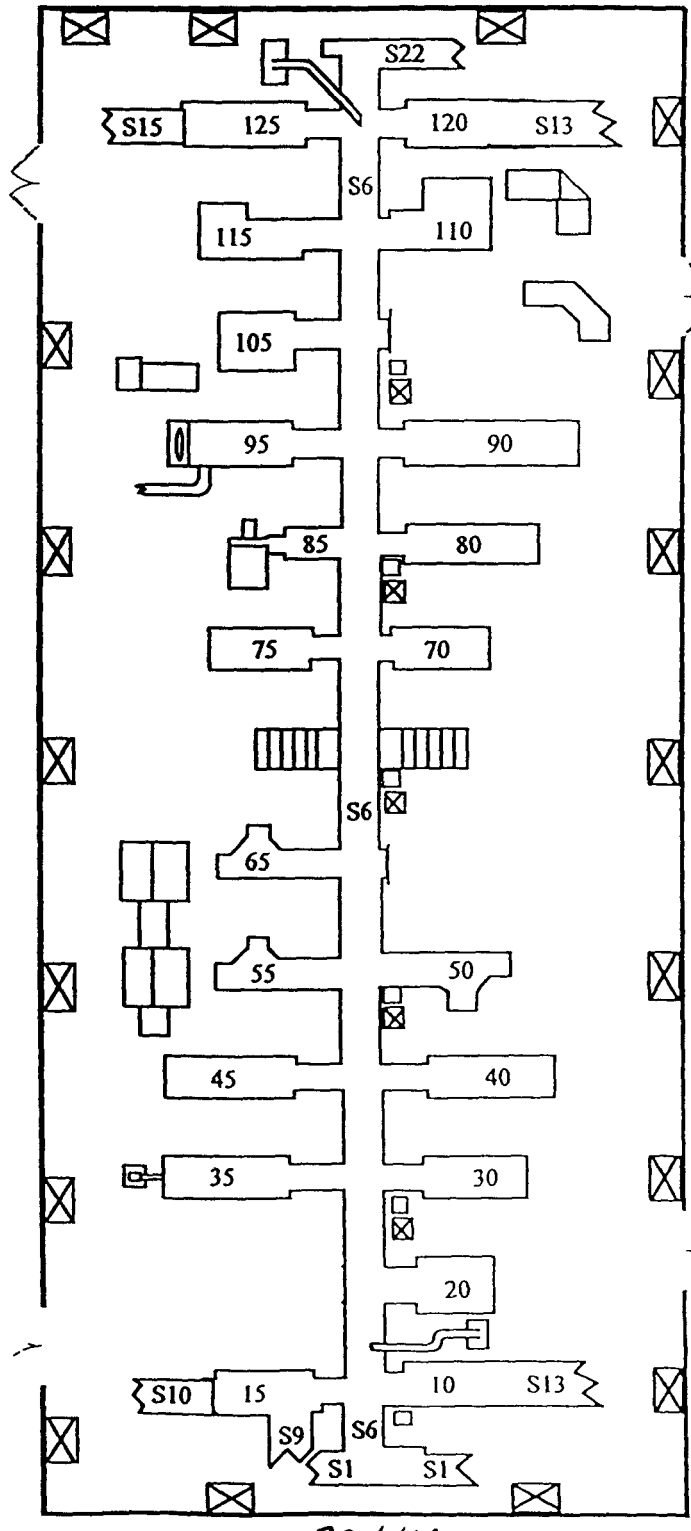
These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points

MODULE D



Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

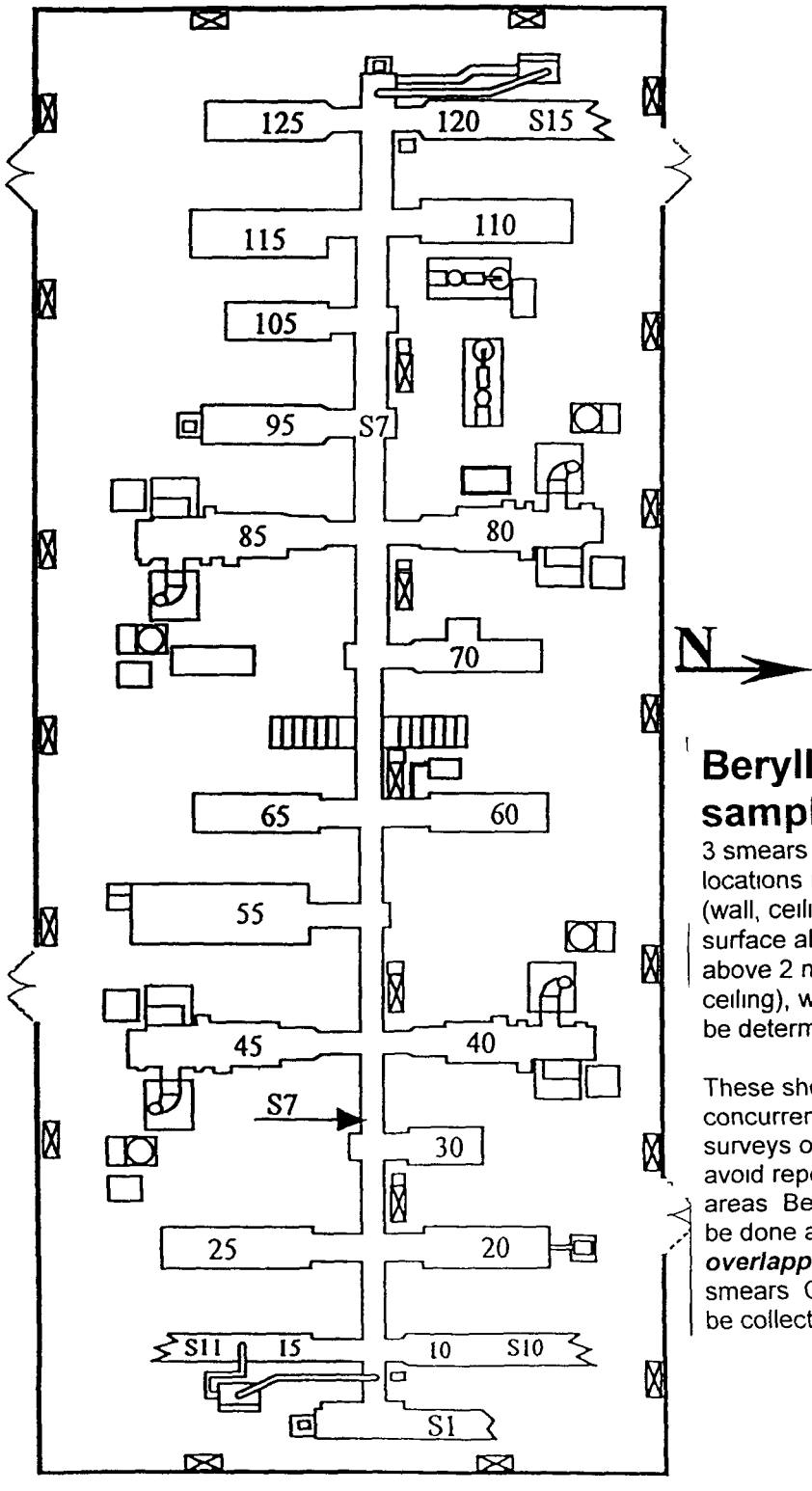
These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points

MODULE E



Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

RADIOLOGICAL SAFETY

Drawing Showing Survey Points

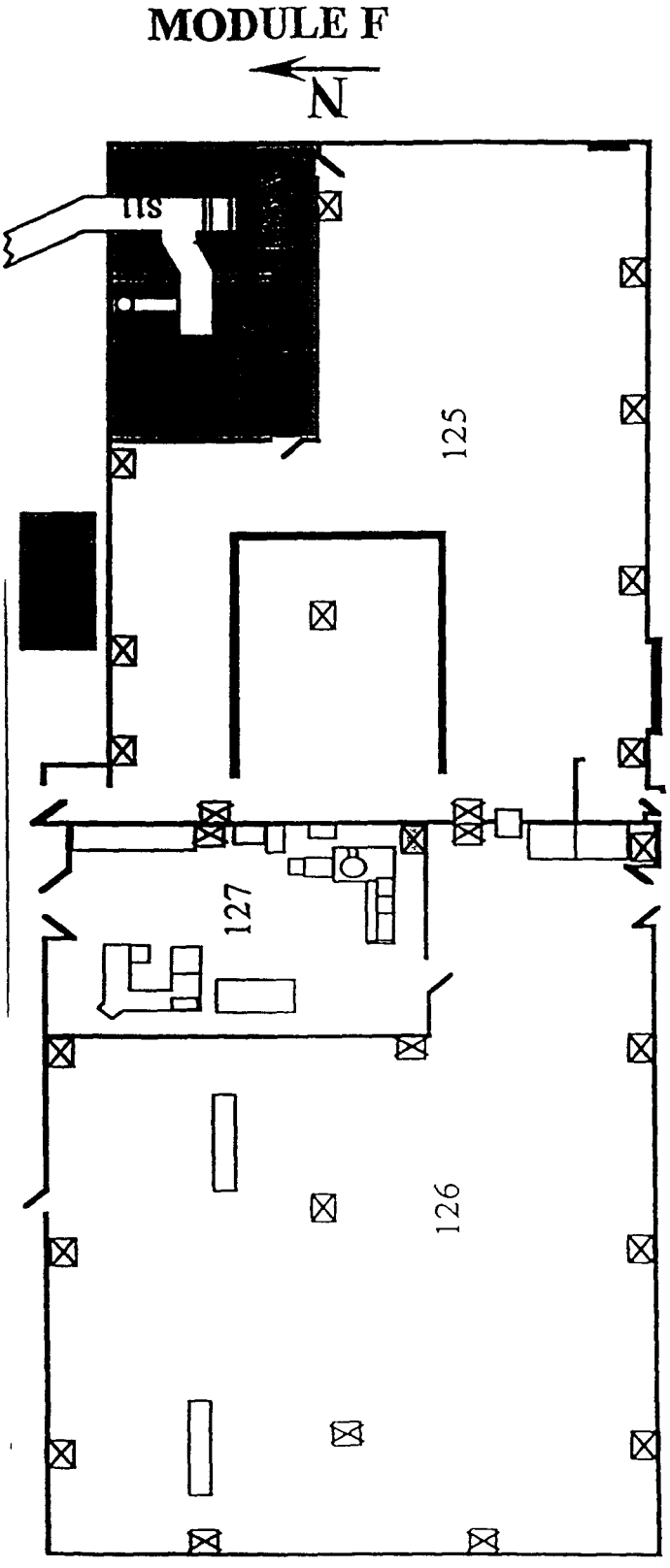
Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

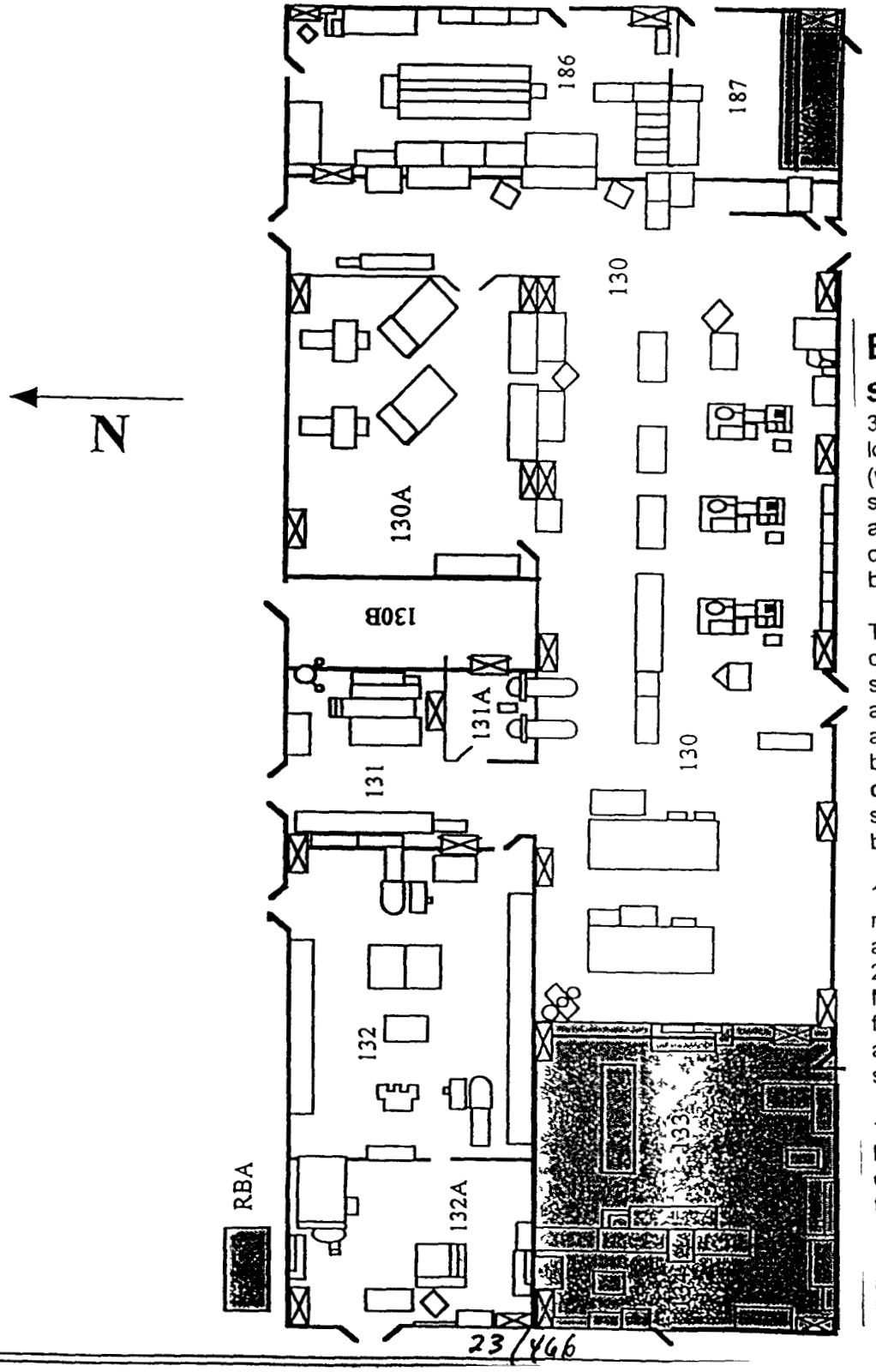
1 smear *inside* each of 6 internal return ducts (i e , remove grille and smear inside duct) of Zone 2 HVAC systems serving Modules F, G, and H (collect 1 field duplicate immediately adjacent to one of these samples),

2 smears on horizontal surfaces (excluding floor) in Room 125 A, Module F,
2 smears on horizontal surfaces (excluding floor) in Room 125B, Module F,



Drawing Showing Survey Points

MODULE G



Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

1 smear *inside* each of 6 internal return ducts (i e , remove grille and smear inside duct) of Zone 2 HVAC systems serving Modules F, G, and H (collect 1 field duplicate immediately adjacent to one of these samples),

1 smear in each of 5 hoods in Module G (collect 1 field duplicate immediately adjacent to one of these samples),

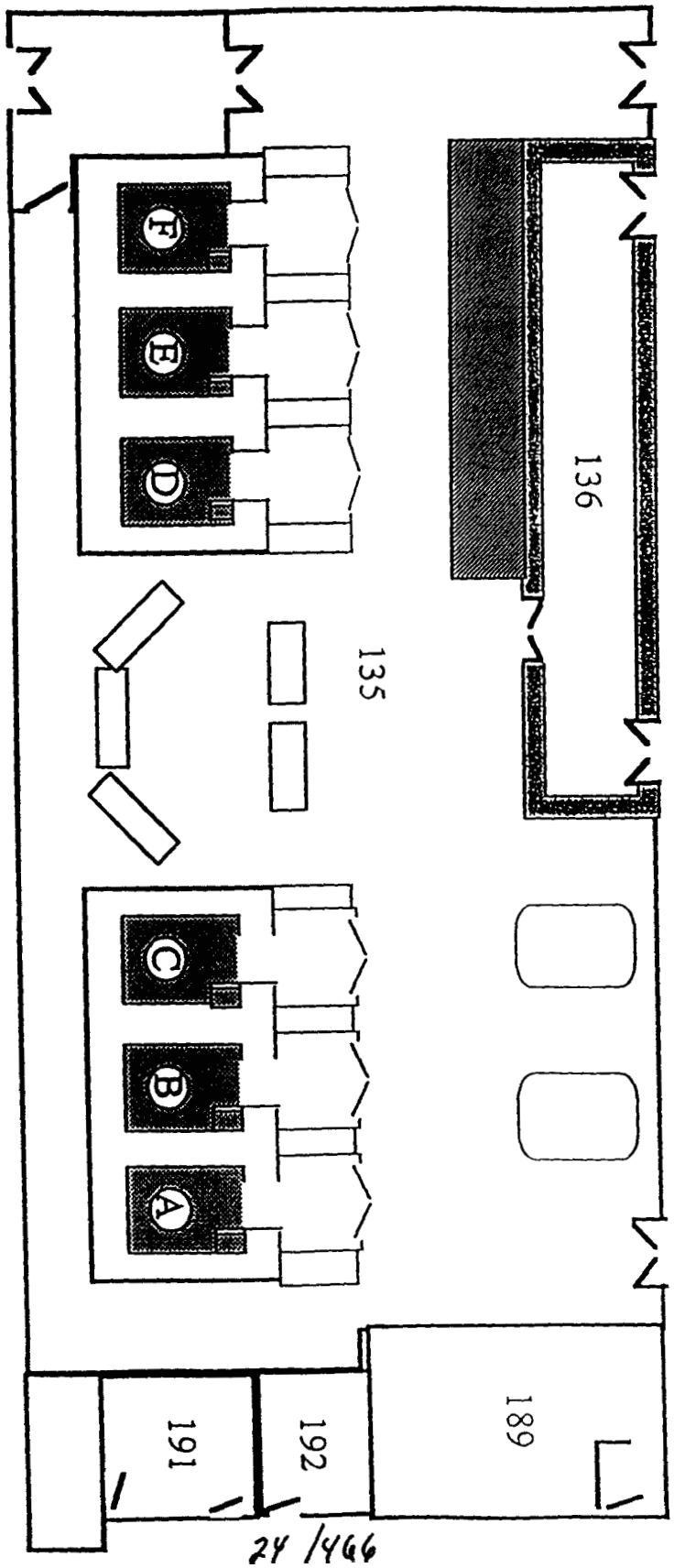
1 smear each from internal areas of 2 pressure chambers in Module G Room 131A

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points

Module H



Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

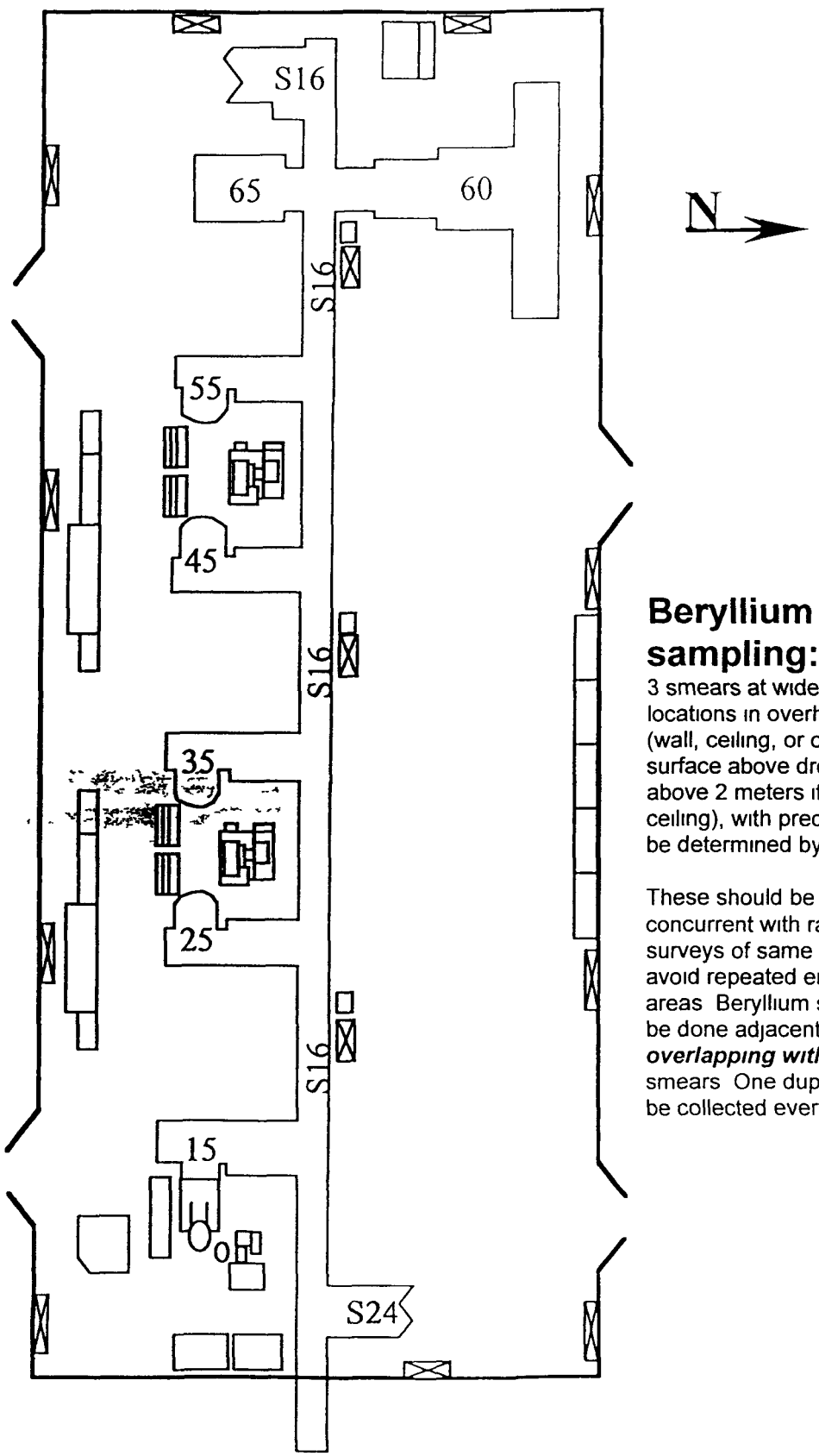
1 smear *inside* each of 6 internal return ducts (i e , remove grille and smear inside duct) of Zone 2 HVAC systems serving Modules F, G, and H (collect 1 field duplicate immediately adjacent to one of these samples),

1 smear each from internal areas of 3 autoclaves in Module H,

2 smears on horizontal surfaces (excluding floor) in Room 135C, Module H (collect 1 field duplicate immediately adjacent to one of these samples),

2 smears on horizontal surfaces (excluding floor) in Room 136 Module H (collect 1 field duplicate immediately adjacent to one of these samples)

MODULE J



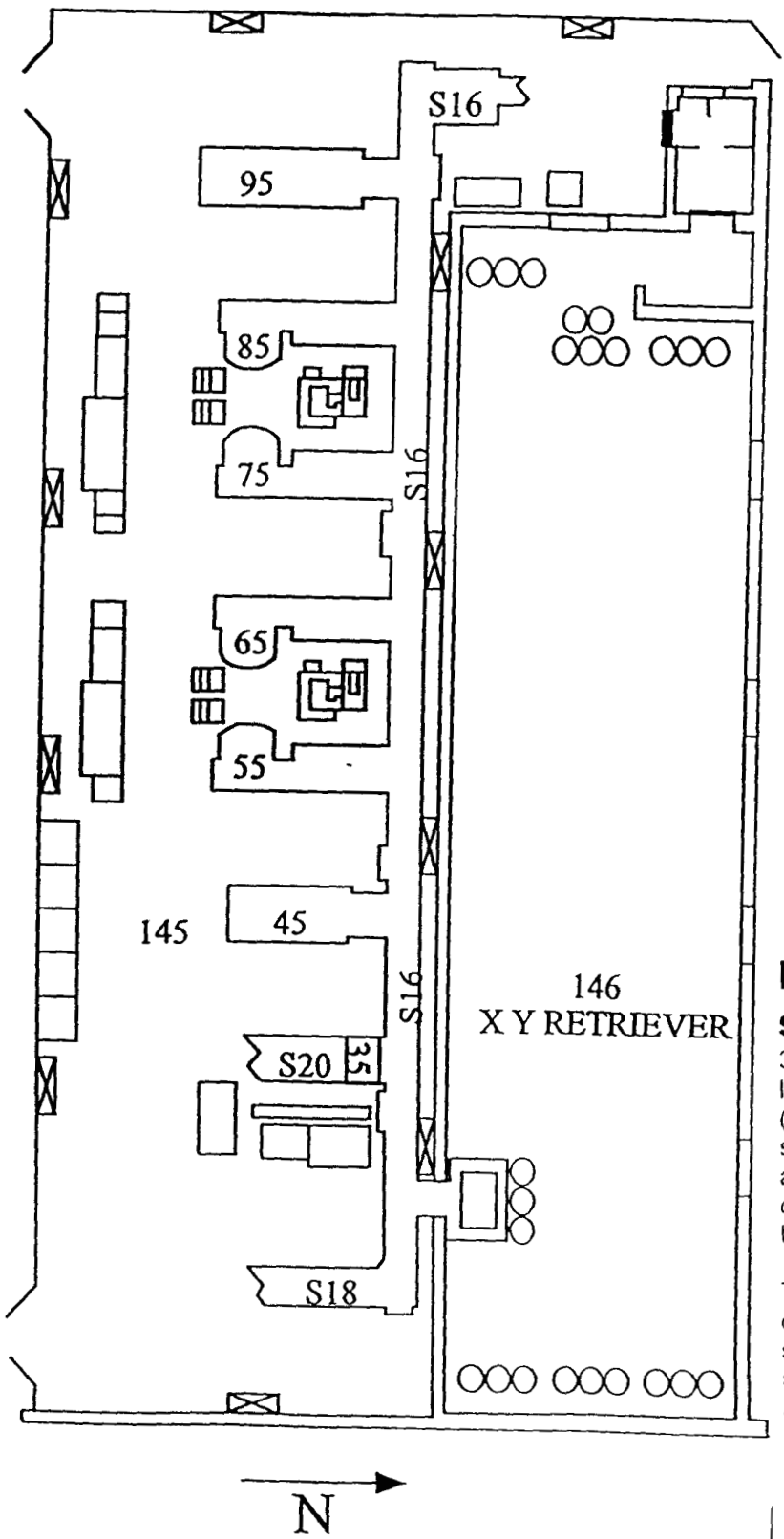
Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

Drawing Showing Survey Points

MODULE K



Beryllium smear sampling:

3 smears at widely distributed locations in overhead areas (wall, ceiling, or other accessible surface above drop ceiling or above 2 meters if no drop ceiling), with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

Survey Area: 707 Cluster	Survey Unit N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

CONCRETE CORE SAMPLING MAPS AND GRIDS FOR LOCATING RANDOM SAMPLING LOCATIONS B-707

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707

Survey Unit Description
Characterization Package for B-707 Cluster

Random Grid Concrete Coring Locations

If the coordinates given below are inaccessible at the time of sampling, the Project Manager will utilize the attached random number list and grid instructions to determine further random locations

A rectangular grid with a 1 3 (x,y) ratio was overlaid on a map of Modules A B, C, D, E, F, G and H (first floor), and Rooms 200, 210, and 220 (second floor) A 3 foot clearance from the N and E walls was given such that samples corresponding to a location having a zero would not be directly adjacent to the wall The grid origin (0,0) is always at the NE corner, 3 feet from the N wall and 3 feet from the E wall

Similarly, a square grid with a 1 1 (x,y) ratio was overlaid on a map of Modules J and K (first floor), and Room 240 (second floor) A 3 foot clearance from the N and E walls was given such that samples corresponding to a location having a zero would not be directly adjacent to the wall The grid origin (0,0) is always at the NE corner, 3 feet from the N wall and 3 feet from the E wall

A random number generator was used to determine sampling coordinates These were converted to building locations utilizing the building's dimensions Points which landed on locations obviously inaccessible were discarded

A total of 7 sample points were generated If at the time of sampling, any of the points given below are inaccessible, the Project Manager will utilize the grid and random numbers list to generate further points

Grid 1 Three sample points (plus 1 duplicate)
Consists of modules A, B, C, D, E, F, G and H, first floor
Rectangle, 1 3, dimensions 134 feet x 458 feet, where (0,0) is at the NE corner of the grid and is 3 feet from the N wall and 3 feet from the E wall of Module A

x grid distance 1 unit = 76 feet, 4 inches
y grid distance 1 unit = 67 feet, 0 inches

Random coordinates from Rectangle 1 3 Random Numbers List

Coordinate 1 (2,0) translates to (152 feet 8 inches, 0 feet) It is on the NW corner of Module A, 3 feet from the N wall and 3 feet from the W wall

Coordinate 2 (2,5) translates to an inaccessible location and is discarded

Coordinate 3 (0,2) translates to (0 feet, 134 feet) It is along the E wall of Module C It is 3 feet from the E wall, and 18 feet from the N wall

Coordinate 4 (2,1) translates to (152 feet 8 inches, 67 feet) It is along the W wall of Module B It is 9 feet from the N wall and 3 feet from the W wall

Grid 2 One sample point
Consists of modules J and K, first floor, with a 3 foot clearance from all walls
Square, 1 1, dimensions 90 feet x 90 feet, where (0,0) is at the NE corner of the grid and is 3 feet from the N wall and 3 feet from the E wall of Module J

x grid distance 1 unit = 18 feet, 0 inches
y grid distance 1 unit = 18 feet, 0 inches

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707

Survey Unit Description

Characterization Package for B-707 Cluster

Random coordinates from Square 1 1 Random Numbers List

Coordinate 1 (5,2) translates to (90 feet, 36 feet) It is along the W wall of Module J It is 3 feet from the W wall and 36 feet from the N wall

Grid 3: Two sample points

Consists of the Rooms 200, 210 and 220 on the second floor, with a 3 foot clearance from all walls
Rectangle, 1 3, dimensions 134 feet x 458 feet, where (0,0) is at the NE corner of the grid and is 3 feet from the N wall and 3 feet from the E wall of Room 200

x grid distance 1 unit = 76 feet, 4 inches
y grid distance 1 unit = 67 feet, 0 inches

Coordinate 5 (0,2) translates to (0 feet, 134 feet) It is 3 feet from the E wall and 137 feet from the N wall of Room 200

Coordinate 6 (1,0) translates to (76 feet 4 inches, 0 feet) It is 79 feet 4 inches from the E wall and 3 feet from the N wall of Room 200 (i e , between Plenum 101 and the N wall)

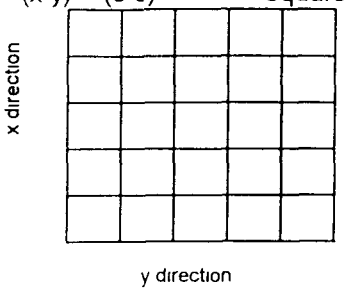
Grid 4 One sample point

Consists of Room 240 on the second floor, with a 3 foot clearance from all walls
Square, dimensions 90 feet x 90 feet, where (0,0) is at the NE corner of the grid and is 3 feet from the N wall and 3 feet from the E wall of Room 240

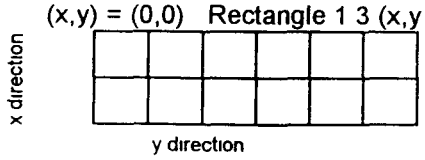
x grid distance 1 unit = 18 feet, 0 inches
y grid distance 1 unit = 18 feet, 0 inches

Coordinate 2 (3,0) translates to (54 feet, 0 feet) It is along the N wall of Room 240 It is 3 feet from the N wall and 54 feet from the E wall

(x y) = (0 0) Square 1 1



(x,y) = (0,0) Rectangle 1 3 (x,y ratio)



GENERAL

For the area consisting of Modules J and K and for Room 240 choose the Square 1 1

For the areas consisting of Modules A through H and Rooms 200 through 220 choose the Rectangle 1 3

DIRECTIONS

1) Assign (0 0) to the NE corner of the sampling area 3 feet from the N wall and 3 feet from the E wall

2a) For Squares measure x or y distance in sampling area and divide by 5 to attain distance between grid points

2b) For Rectangular areas measure x distance and divide by 2 to attain distance between grid points

1 3 width to length measure y distance and divide by 6 to attain distance between grid points

3) Choose the "Random Number Table" that corresponds with the grid type used

4) Use the first number pair (x y coordinates) that can be physically located and sampled

Note If a coordinate value is inaccessible go to the next coordinate

value on the table Continue the sequence until the required quantity of samples is taken

RANDOM NUMBERS GENERATED FOR D&D NONRAD SAMPLE LOCATIONS

GRID TYPE

Square

coordinate value	
(x)	(y)
5	2
3	0
4	3
1	0
4	2
3	5
3	1
4	2
4	1
4	0
0	3
2	3
3	4
1	3
5	4
4	3
2	3
0	1
0	1
0	5
1	5
4	1
2	2
3	0
1	3
3	5
4	4
4	4
5	0
2	3
2	0
2	1
0	2
3	1
0	5
4	4
1	1
1	5
4	3
4	3
4	4
3	5
3	2
5	0
2	3

Rectangle 1 2

coordinate value	
(x)	(y)
0	0
2	4
1	0
1	3
2	2
0	0
0	1
2	4
1	4
0	3
0	1
1	1
0	2
2	0
0	3
0	3
2	3
2	2
2	4
2	2
2	2
0	0
1	2
0	0
0	4
0	1
0	1
1	0
1	1
2	1
0	1
0	2
0	1
2	4
1	3
1	1
2	3
0	4
1	2
0	4
2	1
0	3
2	1
1	4
0	1

Rectangle 1 3

coordinate value	
(x)	(y)
2	0
2	5
0	2
2	1
0	2
1	0
2	0
2	5
1	5
1	6
0	1
0	6
1	4
0	0
0	6
1	3
2	2
2	3
1	0
2	5
1	0
2	6
2	2
1	5
1	0
0	2
2	4
2	2
1	4
2	1
0	4
1	5
2	0
1	6
0	2
2	2
0	1
0	0
0	5
1	1
0	4
0	0
1	6
0	1
2	6

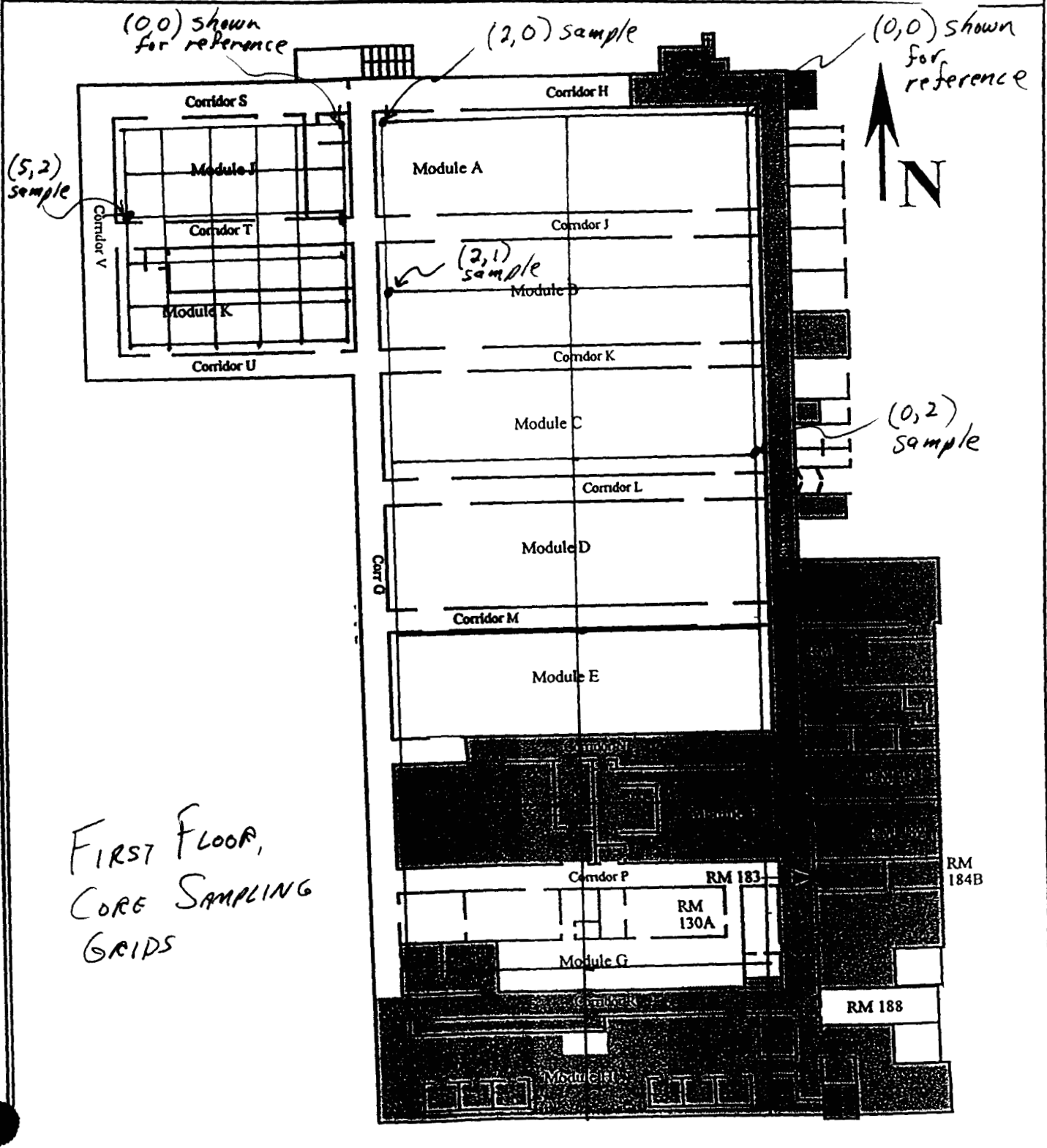
Rectangle 1 4

coordinate value	
(x)	(y)
2	1
1	8
2	5
0	1
2	8
1	8
0	6
0	3
2	2
0	4
1	8
0	3
1	2
2	3
0	9
0	1
2	8
0	2
1	4
1	7
0	6
0	3
1	7
1	2
1	2
0	3
0	6
1	6
1	5
2	9
2	7
0	5
0	9
1	0
0	5
2	8
1	2
0	1
2	5
0	4
0	0
2	4
2	2
2	0
1	2

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points



DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

Reviewing
Official: J. A. NESHEIM
EMCBC Classifier Name Office
Date: 10-09-08

SECOND FLOOR
CORE SAMPLING
GRIDS

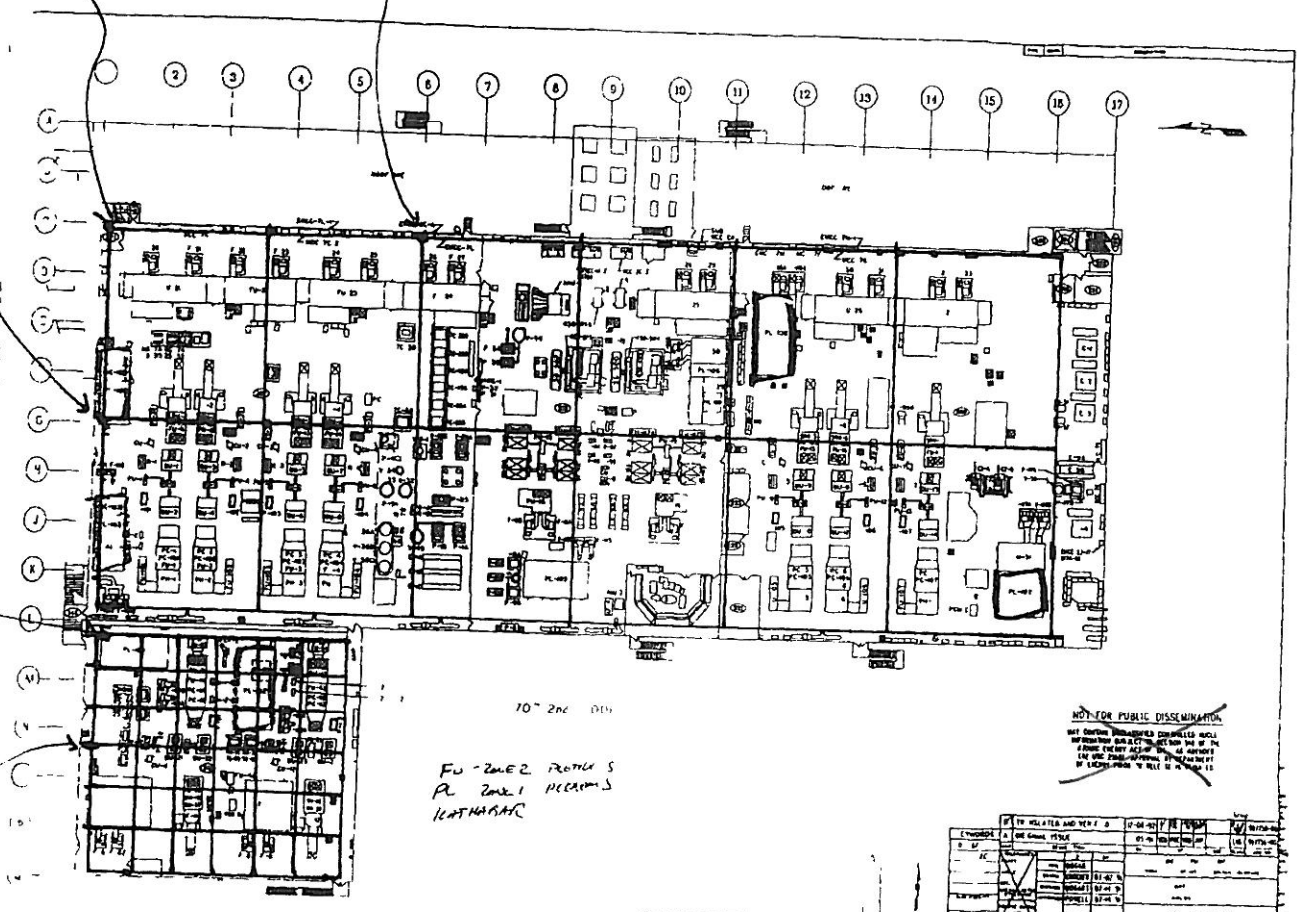
(0,0) shown for reference

(0,2) sample

(1,0) sample

(0,0) shown for reference N↑

(3, sample



NOT FOR PUBLIC DISSEMINATION

MASTER DRAWING

34/466

BLDG 707

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

44

Survey Area: 707 Cluster	Survey Unit N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit N/A	Building 707
Survey Unit Description Characterization Package for B-707 Cluster		

Beryllium Sampling Performed By

I H Technician Printed Name	Employee #	I H Technician Signature	Date
I H Technician Printed Name	Employee #	I H Technician Signature	Date
I H Technician Printed Name	Employee #	I H Technician Signature	Date

Beryllium Sample Release Surveys Performed By

RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Beryllium Sample Release Survey Reviewed By

Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707

Survey Unit Description
Characterization Package for B-707 Cluster

Concrete Sampling Performed By

Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date
Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date
Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date

Concrete Sampling Pre/Post and Sample Release Surveys Performed By

RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Concrete Sampling Pre/Post and Sample Release Survey Reviewed By

Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707S
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building 707S - Oil storage shed

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos**

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit. N/A	Building 707S
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	2 media samples, **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling and analysis **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure,* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707 S
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707 S
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707 S
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707S
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707S
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707T
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

707T Tomographic gamma scanner system trailer (East of 707)

Radiological Contaminants of Concern U, Pu

Non-Radiological Contaminants of Concern Asbestos

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707T
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	3 media samples including thermal systems insulation, surfacing materials, and floor tile/mastic **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure,* Inspection will determine precise sampling locations based upon accessibility Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707 T
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707 T
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building 707 T
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 707T
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit. N/A	Building 707T
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 708
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building B-708 Air Compressor Building

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos**

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit: N/A	Building 708
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	3 media samples including thermal systems insulation and surfacing materials **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure*, Inspection will determine precise sampling locations based upon accessibility Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit N/A	Building 708
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit: N/A	Building 708
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 708
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

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Survey Area: 707 Cluster	Survey Unit N/A	Building 708
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit N/A	Building 708
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit. N/A	Building 708S
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building 708S - Skid mounted breathing air compressor, NW of B-708

Non-Radiological Contaminants of Concern Asbestos

Special Support Requirements

Ladder may be required CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit: N/A	Building 708S
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	Sampling at the discretion of asbestos inspector	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** If conducted, sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc) if samples are taken

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2. A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit: N/A	Building 708 S
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

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Survey Area: 707 Cluster	Survey Unit N/A	Building 708 S
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building 708 S
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit. N/A	Building 708S
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit: N/A	Building 708S
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building 711 Cooling Tower

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos, RCRA Metals**

Special Support Requirements

Ladder, scaffolding, or man-lift Media samplers to take paint samples from floors and wood samples from slats CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	6 media samples on thermal systems insulation and surfacing materials **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure*, Inspection will determine precise sampling locations based upon accessibility
Bulk wood samples for RCRA metals analysis (Potential for Cr-based fungicide in wood)	3 bulk samples plus 1 duplicate, using either coring tool or chisel, **SEE NOTES 1 AND 2**	Sampling and analysis **SHALL** be performed according to PRO-488-BLCR, *Bulk Solids and Liquids Characterization Procedure*, Samples will be analyzed for TCLP metals (RCRA codes D004-D011) pursuant to ASD standards by EPA SW-846 Method 1311, "Toxicity Characteristic Leaching Procedure "
Bulk sludge samples for RCRA metals analysis (Potential for Cr-based fungicide in sludge)	4 bulk samples plus 1 duplicate, using scoopula or trowel, *Utilize same RIN numbers and locations as sludge samples for isotopics described in radiological survey instructions section of this Characterization Package*, **SEE NOTES 1 AND 2**	Sampling and analysis **SHALL** be performed according to PRO-488-BLCR, *Bulk Solids and Liquids Characterization Procedure*, Samples will be analyzed for TCLP metals (RCRA codes D004-D011) pursuant to ASD standards by EPA SW-846 Method 1311, "Toxicity Characteristic Leaching Procedure "

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01 *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

METALS SAMPLING LOG SHEET

FOR SLUDGE AND WOOD CHIP

SAMPLING

Metals Sample Log

SAMPLER _____
EMPLOYEE #_____
DATE _____

Sample Sequence Number	Bldg and Room Number	(1) Media (2) Dust (3) Sludge (4) Paint	Description (color, type of media wood, concrete, etc , type of surface steel, tile, etc , condition of area wet, presence of debris, etc , difficulties in sample collection)	Mass of sample collected (gm)

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Survey Area: 707 Cluster	Survey Unit: N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit. N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

Bulk Wood Chip Sampling Performed By

Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date
Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date
Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date

Bulk Wood Chip Sampling Pre/Post and Sample Release Surveys Performed By

RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Bulk Wood Chip Sampling Pre/Post and Sample Release Survey Reviewed By

Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 711
Survey Unit Description Characterization Package for B-707 Cluster		

Bulk Sludge Sampling Performed By			
Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date
Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date
Sampling Technician Printed Name	Employee #	Sampling Technician Signature	Date

Bulk Sludge Sampling Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Bulk Sludge Sampling Pre/Post and Sample Release Survey Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 711A
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building 711A Emergency Diesel Pump for 711 Cooling Tower

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos**

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit N/A	Building 711A
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	2 samples on thermal systems insulation, **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit N/A	Building 711 A
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit N/A	Building 711 A
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 771 A
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building 711A
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit: N/A	Building 711A
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 718
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building 718 Pump House for Cooling Tower 711

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos**

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team. DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit: N/A	Building 718
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	3 samples on thermal systems insulation and structural media, **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit: N/A	Building 718
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit N/A	Building 718
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 718
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building 718
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit: N/A	Building 718
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building 731
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Building 731 Process Waste Pit, B-707 Plenum Deluge

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos**

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit: N/A	Building 731
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	3 media samples, **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

NOTE 3 Where locations for paint chip sampling are in an area that requires intact paint covering as part of secondary containment, sample locations will be repainted as required by building management

Survey Area: 707 Cluster	Survey Unit: N/A	Building 731
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit: N/A	Building 731
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 731
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building 731
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit: N/A	Building 731
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit. N/A	Building Tanks
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Tanks in 707 Cluster: 16, 206, 208-223, 284, 290, 324, and 325

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos**

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit: N/A	Building Tanks
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements		
Measurement	**Amount & Type**	**Comments**
Media samples for asbestos analysis	Sampling at the discretion of asbestos inspector, **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

Survey Area: 707 Cluster	Survey Unit N/A	Building Tanks

Survey Unit Description
Characterization Package for B-707 Cluster

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Unit descriptions

Tank 16 #2 Diesel storage tank, replacement for Tank 290 / UST-16, northwest of B-709

Tank 206 Carbon tetrachloride storage tank (D-2), north of B-707

Tank 208 Argon storage tank, south of B-707

Tanks 209 to 212 Helium storage tanks (V-41), south of B-707

Tanks 213 to 221 Helium storage tanks (V-42), south of B-707

Tank 222 Helium tanker which supports storage tanks, south of B-707

Tank 223 Liquid nitrogen storage tank, southeast of B-707

Tank 284 Helium storage tank (V-42), south of B-707

Tank 290 Diesel tank (underground), UST-16, northwest of B-709

Tank 324 Diesel tank, supports 711A, west of B-707

Tank 325 Diesel tank, south of B-707

Survey Area: 707 Cluster	Survey Unit: N/A	Building TANKS
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

111

Survey Area: 707 Cluster	Survey Unit N/A	Building TANKS
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building TANKS
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building Tanks
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit N/A	Building Tanks
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Survey Area: 707 Cluster	Survey Unit: N/A	Building Valve Vaults
Survey Unit Description Characterization Package for B-707 Cluster		

CHARACTERIZATION INSTRUCTION COVER SHEET

Valve Vaults in 707 Cluster: VV007 and VV008

Radiological Contaminants of Concern **U, Pu**
Non-Radiological Contaminants of Concern **Asbestos**

Special Support Requirements

Ladder, scaffolding, or man-lift CDPHE-certified asbestos inspector for inspections and sampling RCTs to support sampling operations

Special Safety Precautions

Fall protection is required for work above 6 ft Respiratory protection at the discretion of IH Access to roofs, stairs, or elevated structures may require additional approvals from security personnel Refer to Activity Hazards Analysis and 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements"

Labeling Requirements

Sample containers must be labelled as described in the applicable Characterization Procedure Obtain pre-printed, uniquely numbered sample labels from ASD or RLC project representative if applicable

Characterization Instruction Implementation

This survey package is ready for implementation Adequate detail is provided to allow implementation by the sampling team DQO's and data evaluation requirements are covered in the *Decontamination and Decommissioning Characterization Protocol*, MAN-077-DDCP

[redacted]

Survey Area: 707 Cluster	Survey Unit. N/A	Building Valve Vaults
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY INSTRUCTIONS

Minimum Survey & Sample Measurement Requirements

Measurement	Amount & Type	Comments
Media samples for asbestos analysis	Sampling at the discretion of asbestos inspector, **SEE NOTES 1 AND 2**	Sampler **SHALL** be a **CDPHE Certified Asbestos Inspector,** Sampling **SHALL** be performed according to PRO-563-ACPR, *Asbestos Characterization Procedure* Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e , show pipes, ducts, etc)

NOTE 1 Due to ongoing operations within the buildings and constantly changing accessibility to different locations, precise sampling locations will be determined during pre-evolutionary briefing and walkdown, immediately prior to sample collection Locations at which sampling would cause an unacceptable risk of spread of contamination **SHALL** be excluded and reasons noted in the sampling log In order that sampling locations may be unequivocally located after sample analysis, sampling locations **SHALL** be documented on sample maps as well as the appropriate logs as required by the applicable characterization procedure, **AND** the sample location **SHALL** be physically marked either with a sticker or other durable marking containing the RIN, event, and bottle numbers (or if an IH sample, the IH sample number) of the sample

NOTE 2 A Property / Waste Release Evaluation (P/WRE) is required for all analytical samples to be transported offsite for analysis However, the instructions for RCTs and Radiological Operations Foreman in the following sections may be waived if it is deemed by Radiological Engineering (Arlan Moore) that no assay is required due to building history and process knowledge, per 3-PRO-141-RSP 09 01, *Unrestricted Release of Property, Material, Equipment, and Waste*

Survey Area: 707 Cluster	Survey Unit. N/A	Building VALVE VAULTS
Survey Unit Description Characterization Package for B-707 Cluster		

ASBESTOS INVENTORY WORKSHEET

AND SAMPLING DATA SHEET

Survey Area: 707 Cluster	Survey Unit N/A	Building VALVE VAULTS
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Data Sheet

Job # _____ Name _____ Date _____

General Description of building/area _____

Sample Number	Sample Description and Location

PREPARED BY _____ DATE _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit N/A	Building VALVE VAULTS
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Containing Material Inventory Worksheet

Building Number _____ Room Number _____ Date _____

Pipe insulation

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Type _____ Linear/sq ft _____ Fitting count _____

Duct insulation

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Type _____ Duct Size/app _____ Sq ft _____

Other _____

_____

SURFACE INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

MISCELLANEOUS INVENTORY

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

Location _____ Description _____ Sq ft _____

PREPARED BY _____ **DATE** _____

SIGNATURE _____

Survey Area: 707 Cluster	Survey Unit: N/A	Building Valve Vaults
Survey Unit Description Characterization Package for B-707 Cluster		

SAMPLING AND SURVEY

SIGNATURE SHEETS

Survey Area: 707 Cluster	Survey Unit N/A	Building Valve Vaults
Survey Unit Description Characterization Package for B-707 Cluster		

Asbestos Sampling Performed By			
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date
Certified Asbestos Inspector Printed Name	Employee #	Certified Asbestos Inspector Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Performed By			
RCT Printed Name	Employee #	RCT Signature	Date
RCT Printed Name	Employee #	RCT Signature	Date

Asbestos Sample Pre/Post and Sample Release Surveys Reviewed By			
Rad Ops Supervisor Printed Name	Employee #	Rad Ops Supervisor Signature	Date

Radiological Characterization Instruction

Bldg. 707 Cluster

TALLY OF NUMBER OF SURVEY POINTS

	Building 707 complex												
			UNBIASED Floors/Walls < 2m	BIASED Floors/Walls < 2m	BIASED Ceilings/Walls > 2m	BIASED Equipment	UNBIASED+BIASED Floors/Walls < 2m	BIASED Ceilings/Walls > 2m	BIASED Equipment			
Description	Survey Area		Surface Activity Measurements	Surface Activity Measurements	Surface Activity Measurements	Surface Activity Measurements	Surface Scanning	Surface Scanning	Surface Scanning	Media Samples	Volumetric Samples	Isotopic Gamma Scans
2nd Floor 707	A		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	B		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	C		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	D		30	35	30	45	65	0	0	0	0	0
2nd Floor 707	E		30	35	30	45	65	0	0	0	0	0
2nd Floor 707	F		30	35	30	45	65	0	0	0	0	0
2nd Floor 707	G		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	H		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	I		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	J		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	K		30	25	30	45	55	0	0	0	0	0
2nd Floor 707	L		30	25	30	45	55	0	0	0	0	0
Modules/corridors	M		45	17	30	40	62	0	0	4	0	0
Modules/corridors	N		45	14	30	45	59	0	0	4	0	0
Modules/corridors	O		58	14	40	45	72	0	0	4	0	0
Modules/corridors	P		45	7	30	40	52	0	0	4	0	0
Modules/corridors	Q		45	7	30	40	52	0	0	4	0	0
Modules/corridors	R		45	12	30	30	57	0	0	3	0	0
Modules/corridors	S		185	7	101	40	192	0	0	3	0	0
Modules/corridors	T		140	17	40	40	157	0	0	3	0	0
Corridors/RBA rooms/non RBA rooms	U		275	25	250	60	300	0	0	3	0	0
Corridors/RBA rooms/non RBA rooms	V		110	10	98	30	120	0	0	3	0	0
Corridors/RBA rooms/non RBA rooms	W		105	10	72	30	115	0	0	3	0	0
Modules/corridors	X		50	20	30	45	70	0	0	8	0	0
Corridors/RBA rooms/non RBA rooms	Y		129	0	15	30	129	0	0	0	0	0
ROOF/EXTERIOR	Z		67	46	0	0	113	0	0	2	0	0
708/708S	AA		30	4	30	35	34	0	0	2	0	0
ROOF/EXTERIOR	BB		30	24	0	0	54	0	0	1	0	0
731	CC		30	12	30	30	42	0	0	1	0	0
TANKS	DD		0	0	0	88	0	0	88	0	0	0
711 711A 718	EE		40	0	30	30	40	0	0	2	4	0
ROOF/EXTERIOR	FF		30	0	0	0	30	0	0	0	0	0
ROOF/EXTERIOR	GG		30	0	0	0	30	0	0	1	0	0
707T	HH		30	6	30	30	36	0	0	1	0	0
ROOF/EXTERIOR	II		30	0	0	0	30	0	0	0	0	0
ROOF/EXTERIOR	JJ		30	0	0	0	30	0	0	1	0	0
	TOTALS		1984	582	1276	1268	2566	0	88	57	4	0
TOTAL NUMBER OF SURVEY AREAS=	36											
TOTAL OF ALL SURFACE ACTIVITY MEASUREMENTS INCLUDING EQUIPMENT=	5110											
TOTAL OF ALL SURFACE SCAN MEASUREMENTS=	2654											

1998/711

SURVEY PACKAGE TRACKING FORM

Package ID 99-0002		**Building** 707	
Survey Area A		**Survey Unit** N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

Rev 9/99

INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area A	Survey Unit N/A	Area (m^2) 640
Survey Unit Description North East corner of room 200, 2nd floor of Building 707 Area is North of Column D-4 and East of Column G-3 Building 707 radiological areas are posted as fixed contamination areas		

Survey Type	Classification
RLC Survey X FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description.		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: A	**Survey Unit.** N/A
Survey Unit Description: NORTH EAST CORNER OF ROOM 200, 2ND FLOOR OF BUILDING 707 AREA IS NORTH OF COLUMN D-4 AND EAST OF COLUMN G-3 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS	
Building Information: Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐ Building Type Type 1 ☐ Type 2 ☐ Type 3 X Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X Contaminants of Concern Plutonium X Uranium X Other ☐ _____	
Justification for Classification: N/A	
Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads	
Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor	
Isolation Controls: Level 1 ☐ Level 2 ☐ N/A X	
Labeling Requirements: NONE	
Survey Package Implementation: [redacted]	
Survey Package Closure: [redacted]	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID 99-0002	**Building** 707
Survey Area A	**Survey Unit** N/A

Survey Unit Description: North East corner of room 200, 2nd floor of Building 707 Area is North of Column D-4 and East of Column G-3 Building 707 radiological areas are posted as fixed contamination areas

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following locations - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, etc - Point near each airlock to the plenums - Near waste drum storage - Other areas of potential concern based on RCT judgement/experience **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID· 99-0002	**Building** 707
Survey Area. A	**Survey Unit** N/A
Survey Unit Description· North East corner of room 200, 2nd floor of Building 707 Area is North of Column D-4 and East of Column G-3 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID· 99-0002	**Building**· 707
Survey Area· A	**Survey Unit** N/A

Survey Unit Description North East corner of room 200, 2nd floor of Building 707 Area is North of Column D-4 and East of Column G-3 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3 Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID 99-0002	**Building** 707
Survey Area A	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: A	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]	
RCT Supervisor Signature	Date
Project RE Signature	Date
RESS Manager Signature	Date

[redacted] ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

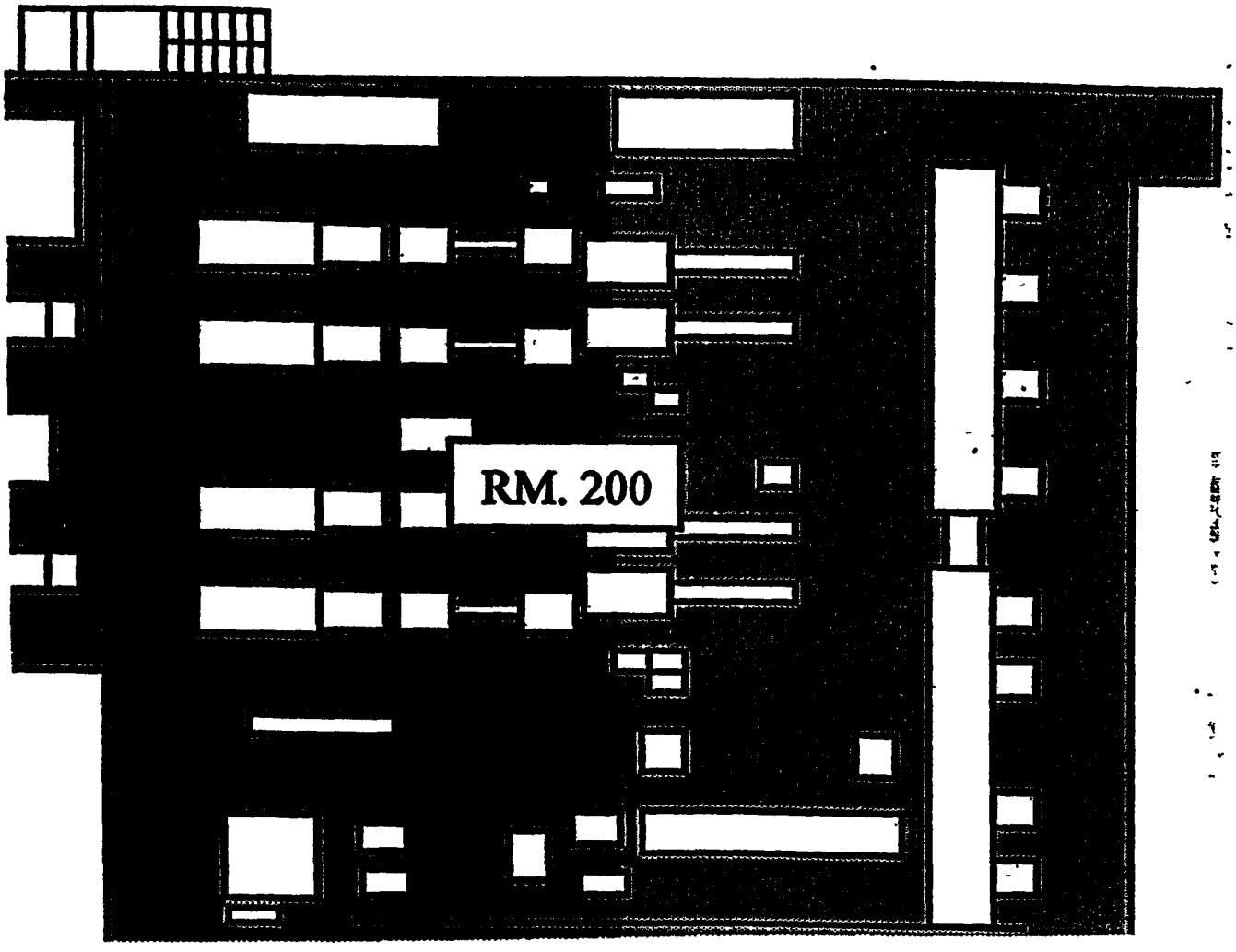
Date Reviewed:_____ RS Supervision:_____ / _____ / _____
Print Name Signature Emp #

136

128/466

RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID. 99-0002		**Building** 707	
Survey Area B		**Survey Unit** N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
JJ 10/25/98			

INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	**Building** 707	**Type** 3
Survey Area B	**Survey Unit** N/A	**Area (m^2)** 640

Survey Unit Description North West corner of room 200, 2nd floor of Building 707 Area is North of Column K-4 and West of Column G-3 Building 707 radiological areas are posted as fixed contamination areas

Survey Type RLC Survey **X** FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown **X**

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans
30	55	45	0	0	55

Building	**Type**	**Survey Area**
Survey Unit	**Area (m^2)**	

Survey Unit Description

Survey Type RLC Survey ☐ FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	**Type**	**Survey Area**
Survey Unit	**Area (m^2)**	

Survey Unit Description

Survey Type RLC Survey ☐ FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	**Type**	**Survey Area**
Survey Unit	**Area (m^2)**	

Survey Unit Description

Survey Type RLC Survey ☐ FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building.** 707
Survey Area: B	**Survey Unit** N/A

Survey Unit Description: NORTH WEST CORNER OF ROOM 200, 2ND FLOOR OF BUILDING 707 AREA IS NORTH OF COLUMN K-4 AND WEST OF COLUMN G-3 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 X

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Contaminants of Concern Plutonium X Uranium X Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A X

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

Survey Package Closure:

[redacted]

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID· 99-0002	**Building** 707
Survey Area: B	**Survey Unit** N/A
Survey Unit Description. North West corner of room 200, 2nd floor of Building 707 Area is North of Column K-4 and West of Column G-3 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following types of areas - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums) hydraulic pumps, etc - Point(s) near plenum airlocks - Tanks having the potential for being internally contaminated - Near waste drum storage areas **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations - Other areas of potential concern based on RCT judgement/experience **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID· 99-0002	**Building** 707
Survey Area. B	**Survey Unit** N/A
Survey Unit Description North West corner of room 200, 2nd floor of Building 707 Area is North of Column K-4 and West of Column G-3 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID 99-0002	**Building.** 707
Survey Area. B	**Survey Unit** N/A

Survey Unit Description. North West corner of room 200, 2nd floor of Building 707 Area is North of Column K-4 and West of Column G-3 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3 Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building** 707
Survey Area B	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: B	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey X	Final Status Survey ☐

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]

RCT Supervisor Signature	Date
Project RE Signature	Date
RESS Manager Signature	Date

[redacted] ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg _____	Mfg._____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments: _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed:_____ **RS Supervision:**_____ / _____ / _____
Print Name Signature Emp #

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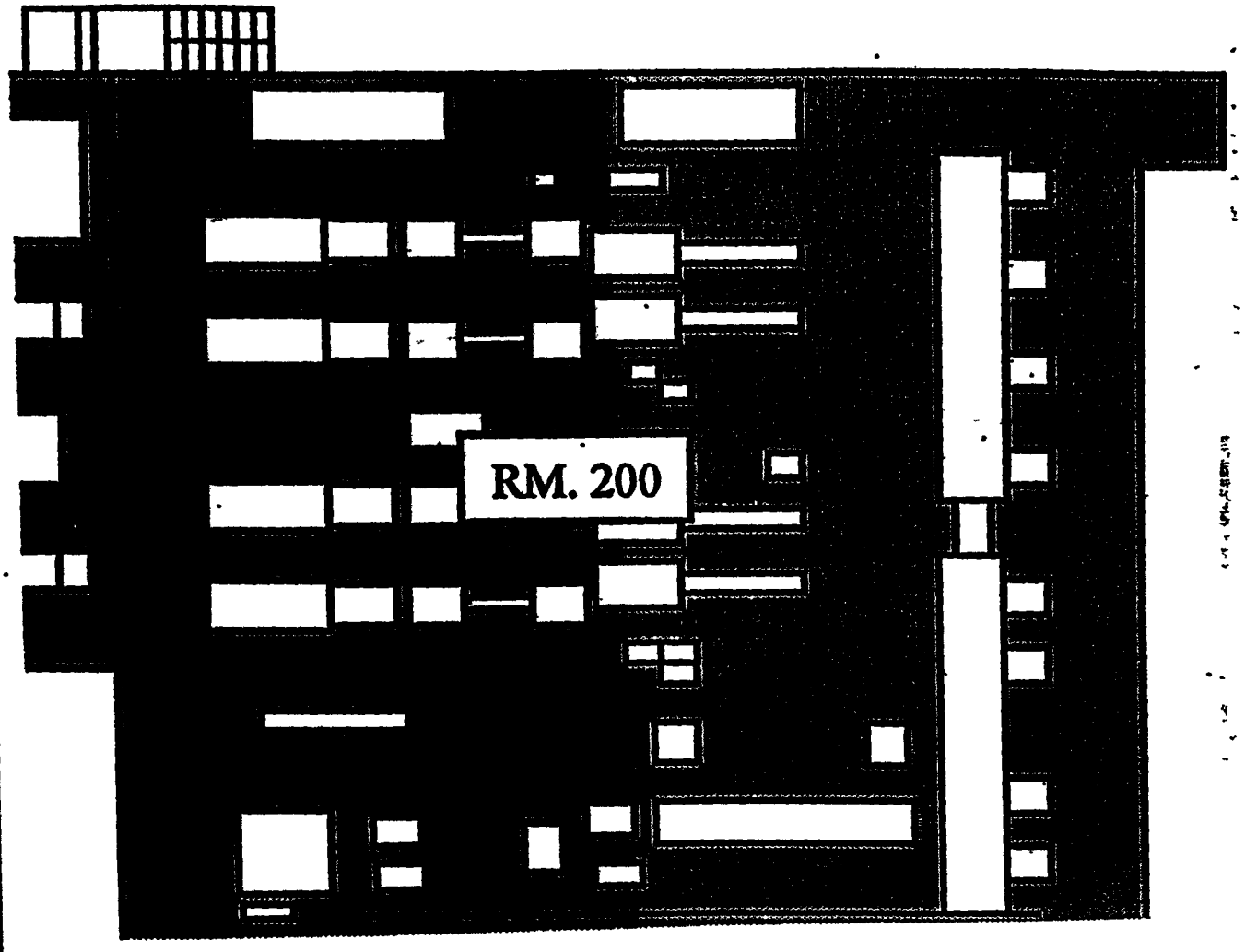
RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID· 99-0002		Building 707	
Survey Area: C		Survey Unit N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building. 707	Type 3
Survey Area C	Survey Unit N/A	Area (m^2) 640

Survey Unit Description. South East corner of room 200 2nd floor of Building 707 Area is South of Column D-4 and East of Column G-5 Building 707 radiological areas are posted as fixed contamination areas

Survey Type		Classification			
RLC Survey X FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description.		

Survey Type		Classification			
RLC Survey ☐ FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type		Classification			
RLC Survey ☐ FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type		Classification			
RLC Survey ☐ FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building** 707
Survey Area: C	**Survey Unit** N/A

Survey Unit Description: SOUTH EAST CORNER OF ROOM 200, 2ND FLOOR OF BUILDING 707 AREA IS SOUTH OF COLUMN D-4 AND WEST OF COLUMN G-5 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey **X** Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 **X**

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown **X**

Contaminants of Concern Plutonium **X** Uranium **X** Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A **X**

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

Survey Package Closure:

[redacted]

ogical Engineer Signature	Date
	N/A
er Signature	Date
er Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: C	**Survey Unit** N/A
Survey Unit Description South East corner of room 200, 2nd floor of Building 707 Area is South of Column D-4 and East of Column G-5 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following types of areas - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, etc - Point(s) near plenum airlocks - Tanks having the potential for being internally contaminated - Near waste drum storage areas **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations - Other areas of potential concern based on RCT judgement/experience **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: C	**Survey Unit** N/A
Survey Unit Description: South East corner of room 200, 2nd floor of Building 707 Area is South of Column D-4 and East of Column G-5 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** **55** 1 m^2 surface scans shall be taken at each location identified for non-scan surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID 99-0002	**Building** 707
Survey Area C	**Survey Unit** N/A

Survey Unit Description South East corner of room 200, 2nd floor of Building 707 Area is South of Column D-4 and East of Column G-5 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3 Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building** 707
Survey Area C	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: C	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey **X** Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]		
	RCT Supervisor Signature	Date
	Project RE Signature	Date
	RESS Manager Signature	Date

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[redacted]

INSTRUMENT DATA

Mfg. _____	Mfg. _____	Mfg. _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type: _____
Building _____
Location _____
Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____
Comments. _____

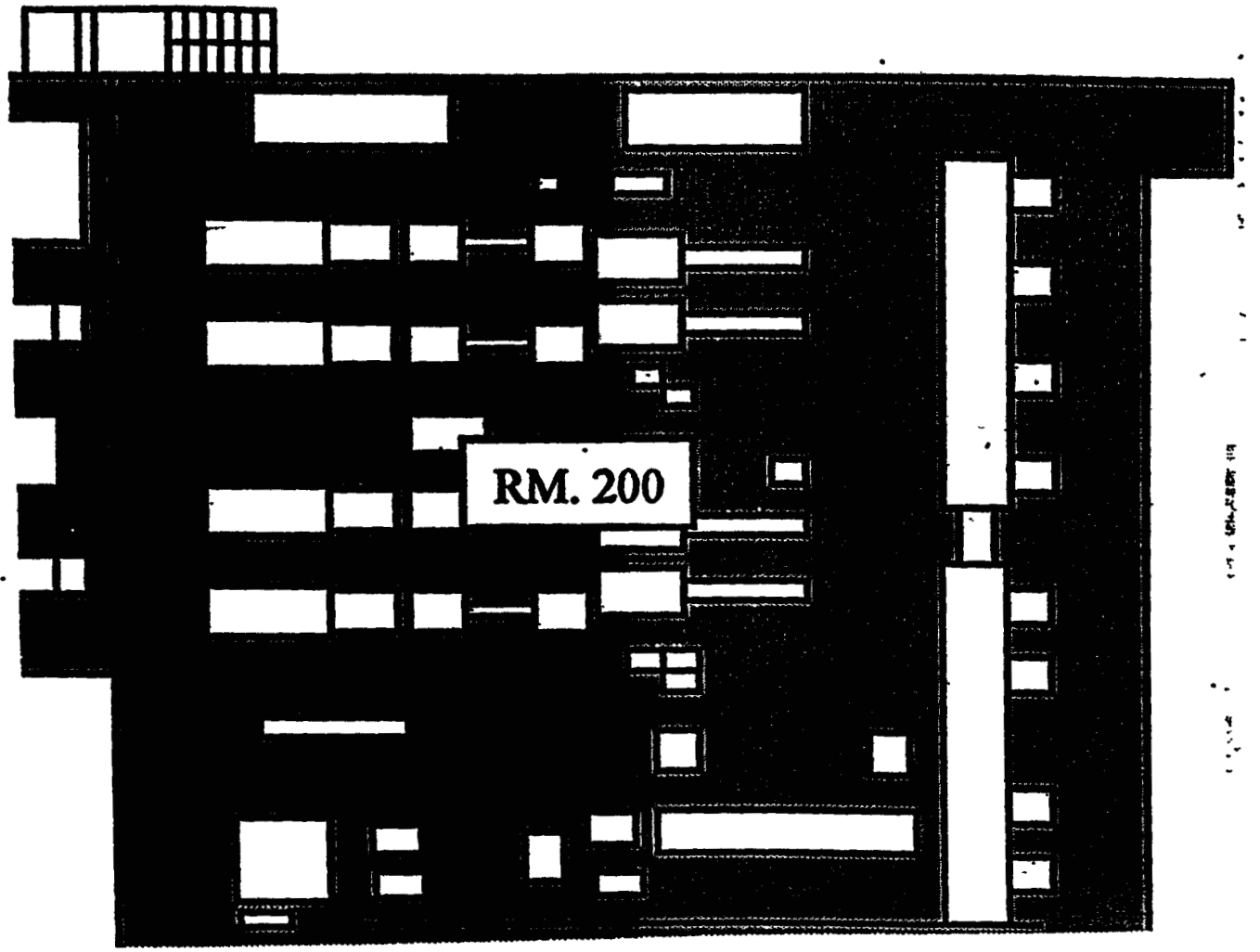
SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed: _____ RS Supervision: _____ / _____ / _____
Print Name Signature Emp #

RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		Building 707	
Survey Area. D		Survey Unit N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area D	Survey Unit N/A	Area (m^2) 640

Survey Unit Description South West corner of room 200, 2nd floor of Building 707 Area is South of Column K-4 and West of Column G-5 Building 707 radiological areas are posted as fixed contamination areas Building 707 radiological areas are posted as fixed contamination areas

Survey Type	Classification
RLC Survey X FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type·	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type·	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building** 707
Survey Area: D	**Survey Unit:** N/A

Survey Unit Description: SOUTH WEST CORNER OF ROOM 200, 2ND FLOOR OF BUILDING 707 AREA IS SOUTH OF COLUMN K-4 AND WEST OF COLUMN G-5 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 X

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Contaminants of Concern Plutonium X Uranium X Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A X

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

Survey Package Closure:

[redacted]

ological Engineer Signature	Date
	N/A
nager Signature	Date
nager Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area· D	**Survey Unit** N/A
Survey Unit Description. South West corner of room 200, 2nd floor of Building 707 Area is South of Column K-4 and West of Column G-5 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following types of areas - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums) hydraulic pumps, etc - Point(s) near plenum airlocks - Tanks having the potential for being internally contaminated - Near waste drum storage areas **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations - Other areas of potential concern based on RCT judgement/experience **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: D (640 m^2)	**Survey Unit** N/A
Survey Unit Description: South West corner of room 200, 2nd floor of Building 707 Area is South of Column K-4 and West of Column G-5 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: D (640 m^2)	**Survey Unit** N/A

Survey Unit Description: South West corner of room 200, 2nd floor of Building 707 Area is South of Column K-4 and West of Column G-5 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- 1m^2 scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3 Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	Building 707
Survey Area: D	Survey Unit N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID 99-0002	**Building** 707
Survey Area: D	**Survey Unit** N/A
Survey Type· Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]		RCT Supervisor Signature	Date
		Project RE Signature	Date
		RESS Manager Signature	Date

ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg._____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____

Building:_____

Location:_____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments: _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed:_____ **RS Supervision:**_____ / _____ / _____
Print Name Signature Emp #

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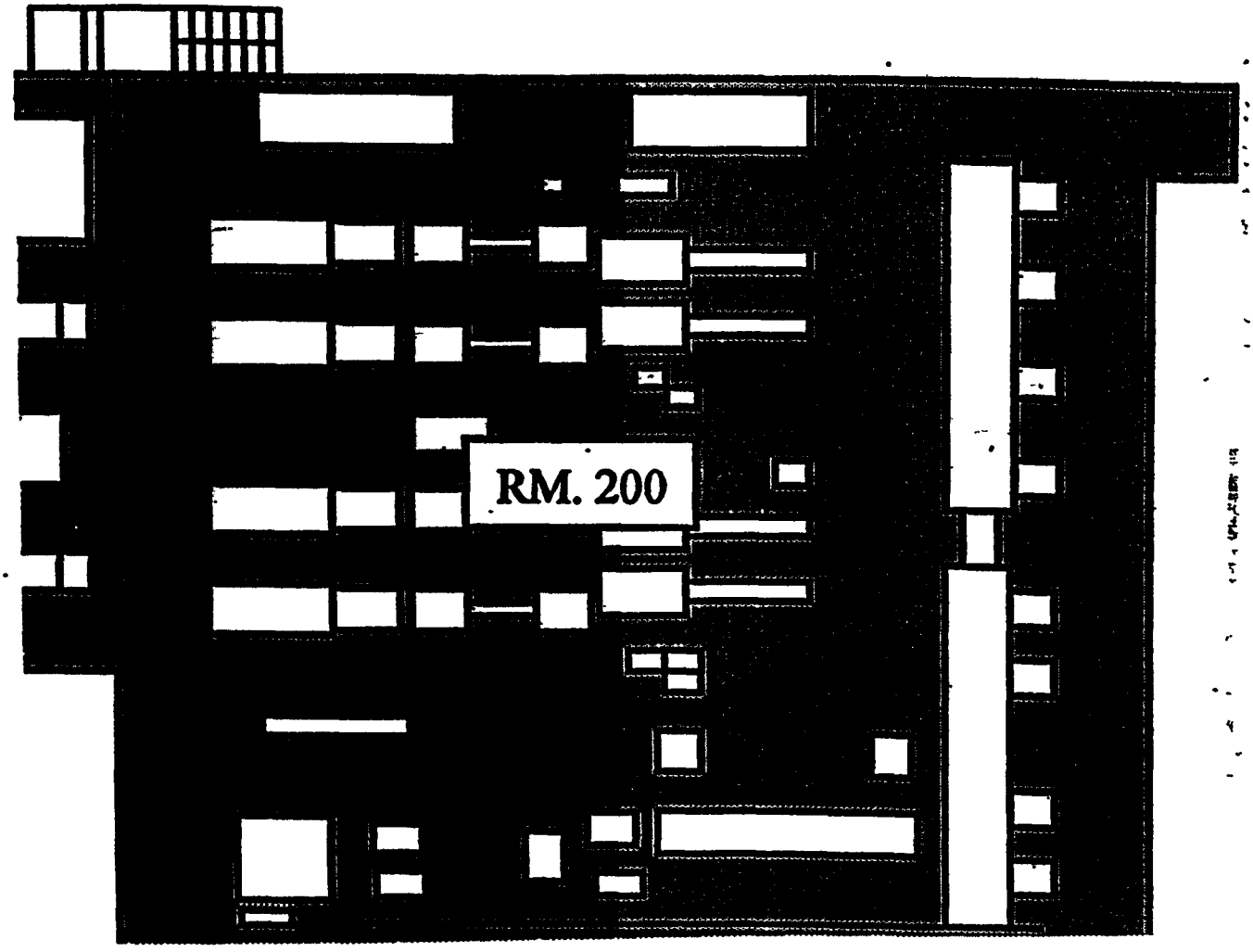
RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID· 99-0002		Building 707	
Survey Area. E		Survey Unit N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
JJ 10/25/99			

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	**Building** 707	**Type** 3
Survey Area E	**Survey Unit** N/A	**Area (m^2)** 841

Survey Unit Description East half of room 210, 2nd floor of Building 707 Area is East of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas

Survey Type RLC Survey X FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans
30	65	45	0	0	65

Building	**Type**	**Survey Area**
Survey Unit	**Area (m^2)**	

Survey Unit Description

Survey Type RLC Survey ☐ FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	**Type**	**Survey Area**
Survey Unit	**Area (m^2)**	

Survey Unit Description

Survey Type RLC Survey ☐ FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	**Type**	**Survey Area**
Survey Unit	**Area (m^2)**	

Survey Unit Description

Survey Type RLC Survey ☐ FSS ☐	**Classification** Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building.** 707
Survey Area: E	**Survey Unit** N/A

Survey Unit Description: EAST HALF OF ROOM 210, 2ND FLOOR OF BUILDING 707 AREA IS EAST OF COLUMNS G-7, G-9, G-11 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey **X** Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 **X**

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown **X**

Contaminants of Concern Plutonium **X** Uranium **X** Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A **X**

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

Survey Package Closure:

[redacted]

Radiological Engineer Signature	Date
	N/A
Manager Signature	Date

RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: E	**Survey Unit** N/A
Survey Unit Description: East half of room 210, 2nd floor of Building 707 Area is East of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **35** biased survey points at the following types of areas - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, etc - Point(s) near plenum airlocks - Tanks having the potential for being internally contaminated - Areas of potential concern based on RCT judgement/experience - Near waste drum storage areas **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations - Areas of potential concern based on RCT judgement/experience **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID· 99-0002	**Building** 707
Survey Area· E	**Survey Unit**· N/A
Survey Unit Description East half of room 210, 2nd floor of Building 707 Area is East of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 65 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID. 99-0002	**Building** 707
Survey Area: E	**Survey Unit** N/A
Survey Unit Description East half of room 210, 2nd floor of Building 707 Area is East of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas	

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2. The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3. Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID 99-0002	Building 707
Survey Area· E	Survey Unit N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID. 99-0002	**Building** 707
Survey Area. E	**Survey Unit:** N/A
Survey Type Reconnaissance Level Characterization Survey **X** Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]

CT Supervisor Signature	Date
roject RE Signature	Date
ESS Manager Signature	Date

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg. _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type: _____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp. #

PRL # : _____

Comments: _____

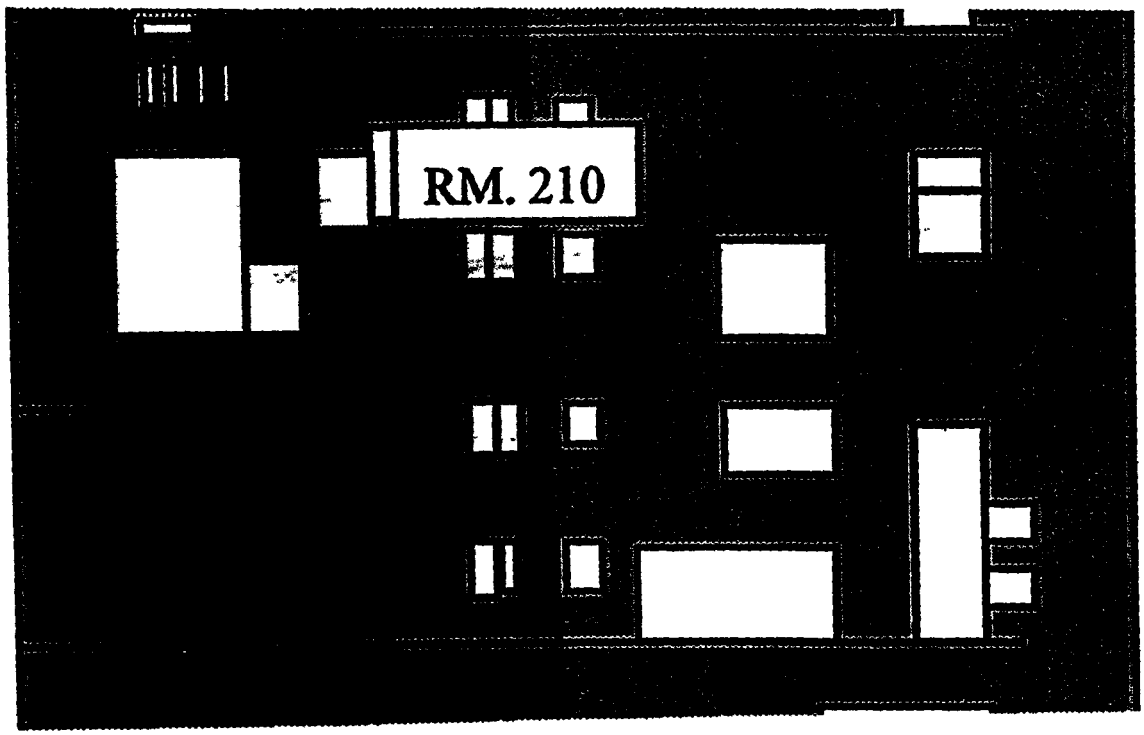
SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1.					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed: _____ **RS Supervision:** _____ / _____ / _____
Print Name Signature Emp #

RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		**Building** 707	
Survey Area: F		**Survey Unit** N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
JJ 10/25/99			

INITIAL SURVEY PACKAGE DESIGN FORM

Package ID. 99-0002	Building 707	Type 3
Survey Area F	Survey Unit. N/A	Area (m^2) 841
Survey Unit Description West half of room 210, 2nd floor of Building 707 Area is West of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas		

Survey Type			Classification		
RLC Survey X FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**
30	65	45	0	0	65

Building	Type	Survey Area
Survey Unit.	Area (m^2)	
Survey Unit Description:		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: F	**Survey Unit** N/A

Survey Unit Description: WEST HALF OF ROOM 210, 2ND FLOOR OF BUILDING 707 AREA IS WEST OF COLUMNS G-7, G-9, G-11 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey **X** Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 **X**

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown **X**

Contaminants of Concern Plutonium **X** Uranium **X** Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A **X**

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

[redacted]

ESS Radiological Engineer Signature	Date
/A	N/A
EFS Manager Signature	Date
ESS Manager Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: F	**Survey Unit** N/A
Survey Unit Description: West half of room 210, 2nd floor of Building 707 Area is West of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **35** biased survey points at the following types of areas - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, etc - Point(s) near plenum airlocks - Tanks having the potential for being internally contaminated - Areas of potential concern based on RCT judgement/experience - Near waste drum storage areas **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations - Areas of potential concern based on RCT judgement/experience **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building.** 707
Survey Area· F	**Survey Unit** N/A
Survey Unit Description. West half of room 210, 2nd floor of Building 707 Area is West of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 65 1 m^2 surface scans shall be taken at each location identified for non-scan surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID· 99-0002	**Building** 707
Survey Area: F	**Survey Unit** N/A
Survey Unit Description· West half of room 210, 2nd floor of Building 707 Area is West of Columns G-7, G-9, G-11 Building 707 radiological areas are posted as fixed contamination areas	

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3 Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building** 707
Survey Area: F	**Survey Unit:** N/A

Change #	Description	Initiator/ Date	PRE

SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID. 99-0002	**Building** 707
Survey Area. F	**Survey Unit.** N/A
Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]	
RCT Supervisor Signature	Date
Project RE Signature	Date
RESS Manager Signature	Date

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[redacted] ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg. _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg. _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type: _____
Building _____
Location _____
Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp. #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____
Comments: _____

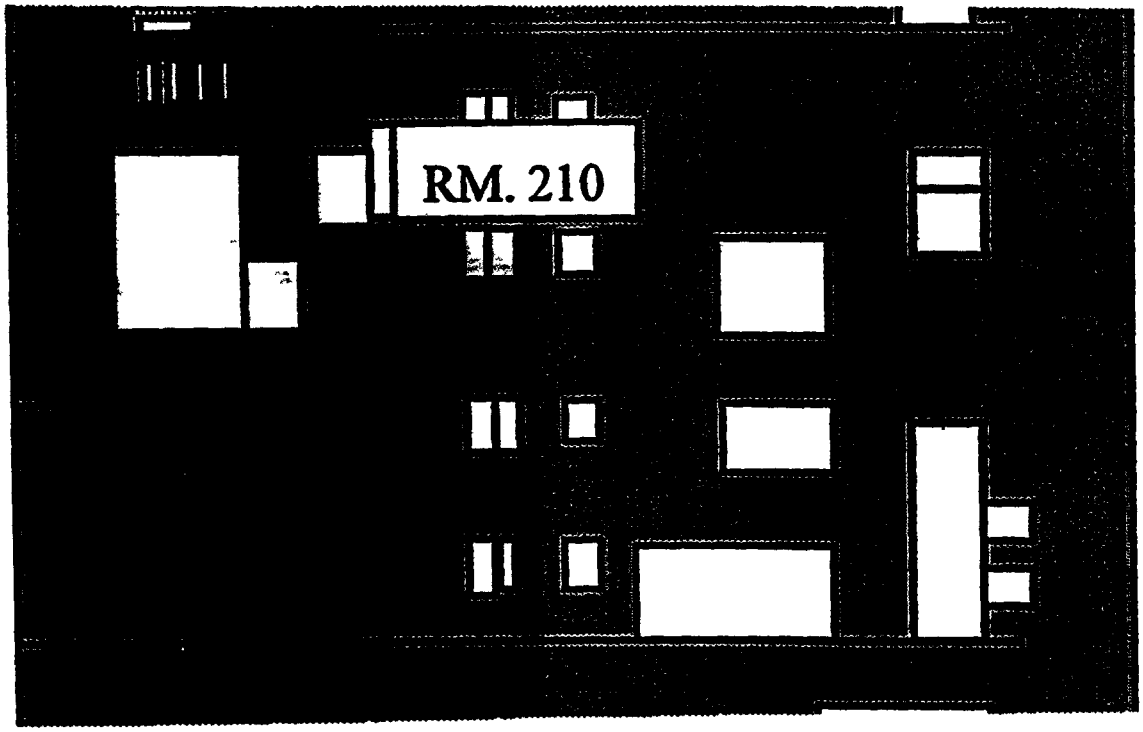
SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1.					26				
2					27				
3.					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed: _____ **RS Supervision:** _____ / _____ / _____
Print Name Signature Emp #

RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		**Building** 707	
Survey Area. G		**Survey Unit** N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
JM 10/25/99			

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area G	Survey Unit. N/A	Area (m^2) 640

Survey Unit Description: North East corner of room 220, 2nd floor of Building 707 Area is North of Column D-14 and East of Column G-13 Building 707 radiological areas are posted as fixed contamination areas

Survey Type		Classification			
RLC Survey X FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type		Classification			
RLC Survey ☐ FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building.	Type	Survey Area
Survey Unit·	Area (m^2)	
Survey Unit Description		

Survey Type		Classification			
RLC Survey ☐ FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type		Classification			
RLC Survey ☐ FSS ☐		Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐			
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: G	**Survey Unit** N/A

Survey Unit Description: NORTH EAST CORNER OF ROOM 220, 2ND FLOOR OF BUILDING 707 AREA IS NORTH OF COLUMN D-14 AND EAST OF COLUMN G-13 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey **X** Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 **X**

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown **X**

Contaminants of Concern Plutonium **X** Uranium **X** Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A **X**

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

Survey Package Closure:

[redacted]	
SS Radiological Engineer Signature	Date
/A	N/A
FS Manager Signature	Date
SS Manager Signature	Date

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: G	**Survey Unit** N/A
Survey Unit Description: North East corner of room 220, 2nd floor of Building 707 Area is North of Column D-14 and East of Column G-13 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following locations - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, cathene system, etc - Point near each airlock to the plenums - Near waste drum storage - Rooms 221, 222, 223, and maintenance cage area - Stained/discolored areas - Other areas of potential concern based on RCT judgement/experience **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Fixed equipment in maintenance cage - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: G	**Survey Unit** N/A
Survey Unit Description North East corner of room 220, 2nd floor of Building 707 Area is North of Column D-14 and East of Column G-13 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** **55** 1 m^2 surface scans shall be taken at each location identified for non-scan surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID. 99-0002	**Building** 707
Survey Area: G	**Survey Unit** N/A

Survey Unit Description: North East corner of room 220, 2nd floor of Building 707 Area is North of Column D-14 and East of Column G-13 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3: Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building:** 707
Survey Area: G	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: G	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]		RCT Supervisor Signature	Date
		Project RE Signature	Date
		RESS Manager Signature	Date

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VENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Mfg.	Mfg.
Model	Model	Model
Serial #	Serial #	Serial #
Cal Due	Cal Due	Cal Due
Bkg	Bkg	Bkg
Efficiency	Efficiency	Efficiency
MDA	MDA	MDA
Mfg	Mfg.	Mfg.
Model	Model	Model
Serial #	Serial #	Serial #
Cal Due	Cal Due	Cal Due
Bkg	Bkg	Bkg.
Efficiency	Efficiency	Efficiency
MDA	MDA	MDA

Survey Type: _____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments: _____

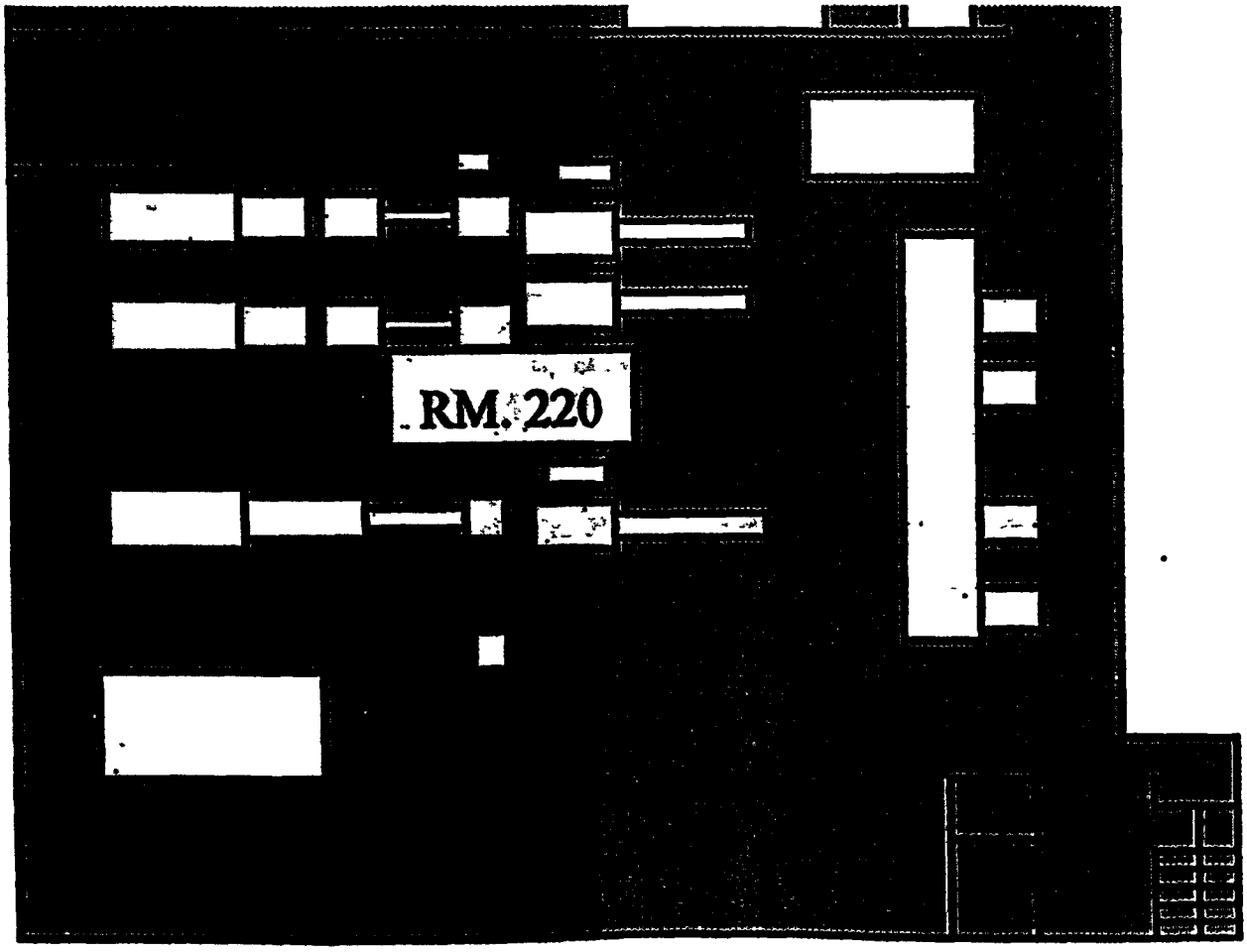
SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed: _____ **RS Supervision:** _____ / _____ / _____
Print Name Signature Emp #

RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		Building 707	
Survey Area. H		Survey Unit N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area H	Survey Unit. N/A	Area (m^2) 640

Survey Unit Description North West corner of room 220, 2nd floor of Building 707 Area is North of Column K-14 and West of Column G-13 Building 707 radiological areas are posted as fixed contamination areas

Survey Type			Classification		
RLC Survey X FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit.	Area (m^2)	
Survey Unit Description·		

Survey Type·			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building.	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type.			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type·			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: H	**Survey Unit** N/A

Survey Unit Description: NORTH WEST CORNER OF ROOM 220, 2ND FLOOR OF BUILDING 707 AREA IS NORTH OF COLUMN K-14 AND WEST OF COLUMN G-13 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 X

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Contaminants of Concern Plutonium X Uranium X Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A X

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

Survey Package Closure:

[redacted]

ological Engineer Signature	Date
	N/A
ager Signature	Date
ager Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: H	**Survey Unit** N/A
Survey Unit Description North West corner of room 220, 2nd floor of Building 707 Area is North of Column K-14 and West of Column G-13 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following locations - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, cathene system, etc - Point near each airlock to the plenums - Near waste drum storage - Rooms 221, 222, 223, and maintenance cage area - Stained/discolored areas - Other areas of potential concern based on RCT judgement/experience **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Fixed equipment in maintenance cage - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area. H	**Survey Unit** N/A
Survey Unit Description: North West corner of room 220, 2nd floor of Building 707 Area is North of Column K-14 and West of Column G-13 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: H	**Survey Unit.** N/A

Survey Unit Description. North West corner of room 220, 2nd floor of Building 707 Area is North of Column K-14 and West of Column G-13 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3: Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID 99-0002	**Building** 707
Survey Area: H	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: H	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]		RCT Supervisor Signature	Date
		Project RE Signature	Date
		RESS Manager Signature	Date

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[redacted] ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg._____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____
Building _____
Location* _____
Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____
Comments: _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
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16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed:_____ RS Supervision:_____ / _____
Print Name Signature Emp #

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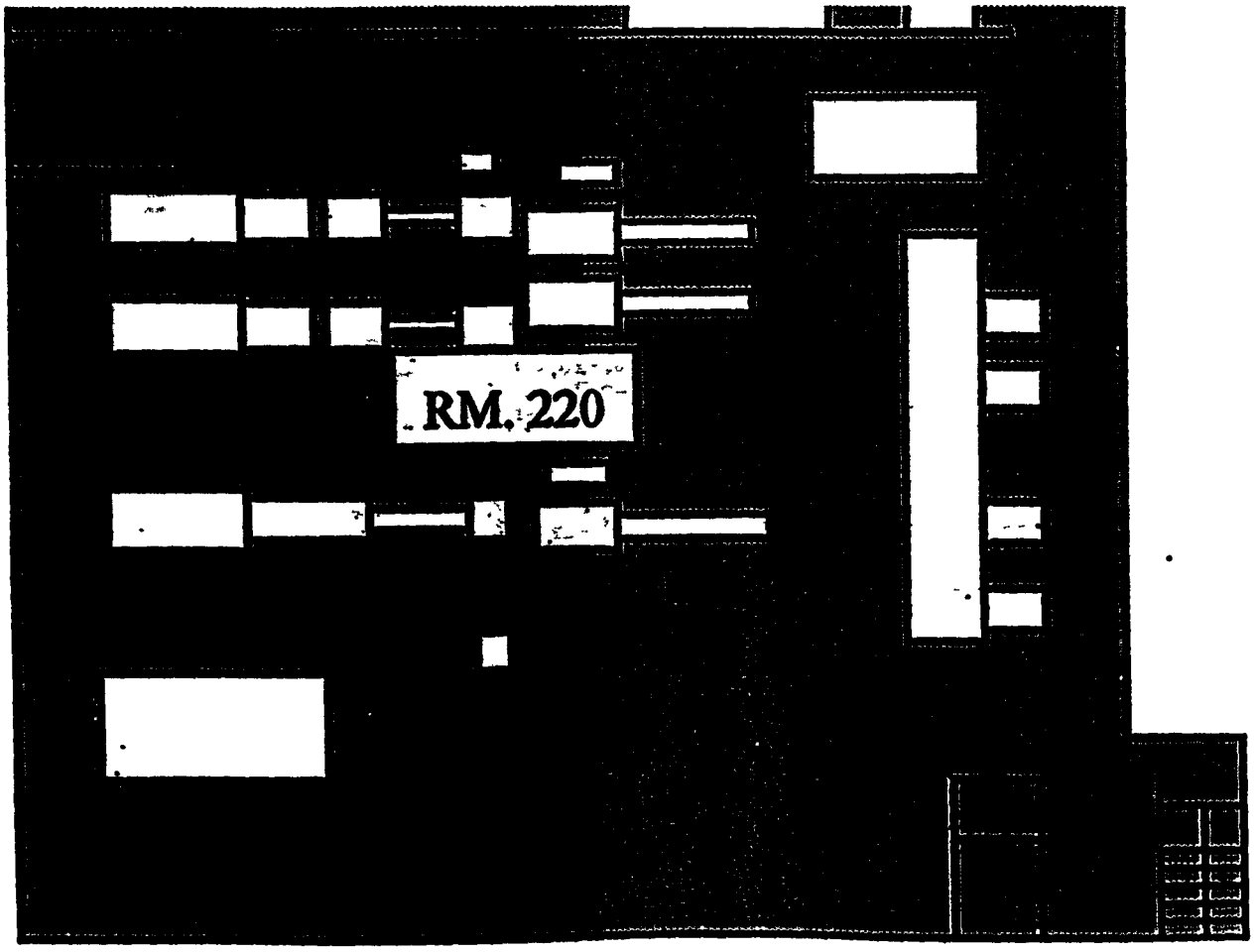
RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		Building 707	
Survey Area: I		Survey Unit N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area I	Survey Unit· N/A	Area (m^2) 640
Survey Unit Description South East corner of room 220, 2nd floor of Building 707 Area is South of Column D-14 and East of Column G-15 Building 707 radiological areas are posted as fixed contamination areas		

Survey Type	Classification
RLC Survey X FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building.	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type.	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: I	**Survey Unit:** N/A

Survey Unit Description: SOUTH EAST CORNER OF ROOM 220, 2ND FLOOR OF BUILDING 707 AREA IS SOUTH OF COLUMN D-14 AND EAST OF COLUMN G-15 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 X

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Contaminants of Concern Plutonium X Uranium X Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A X

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

Survey Package Closure:

[redacted]

		Radiological Engineer Signature	Date
		A	N/A
		Manager Signature	Date
RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: I	**Survey Unit** N/A
Survey Unit Description: South East corner of room 220, 2nd floor of Building 707 Area is South of Column D-14 and East of Column G-15 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following locations - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, cathene system, etc - Point near each airlock to the plenums - Near waste drum storage - Rooms 221, 222, 223, and maintenance cage area - Stained/discolored areas - Other areas of potential concern based on RCT judgement/experience **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Fixed equipment in maintenance cage - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: I	**Survey Unit** N/A

Survey Unit Description. South East corner of room 220, 2nd floor of Building 707 Area is South of Column D-14 and East of Column G-15 Building 707 radiological areas are posted as fixed contamination areas

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area. I	**Survey Unit:** N/A

Survey Unit Description: South East corner of room 220, 2nd floor of Building 707 Area is South of Column D-14 and East of Column G-15 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2· The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3· Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building** 707
Survey Area: I	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: I	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]			
		RCT Supervisor Signature	Date
		Project RE Signature	Date
		RESS Manager Signature	Date

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ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg. _____	Bkg. _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments: _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
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18					43				
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24					49				
25					50				

Date Reviewed:_____ RS Supervision:_____ / _____ / _____
Print Name Signature Emp #

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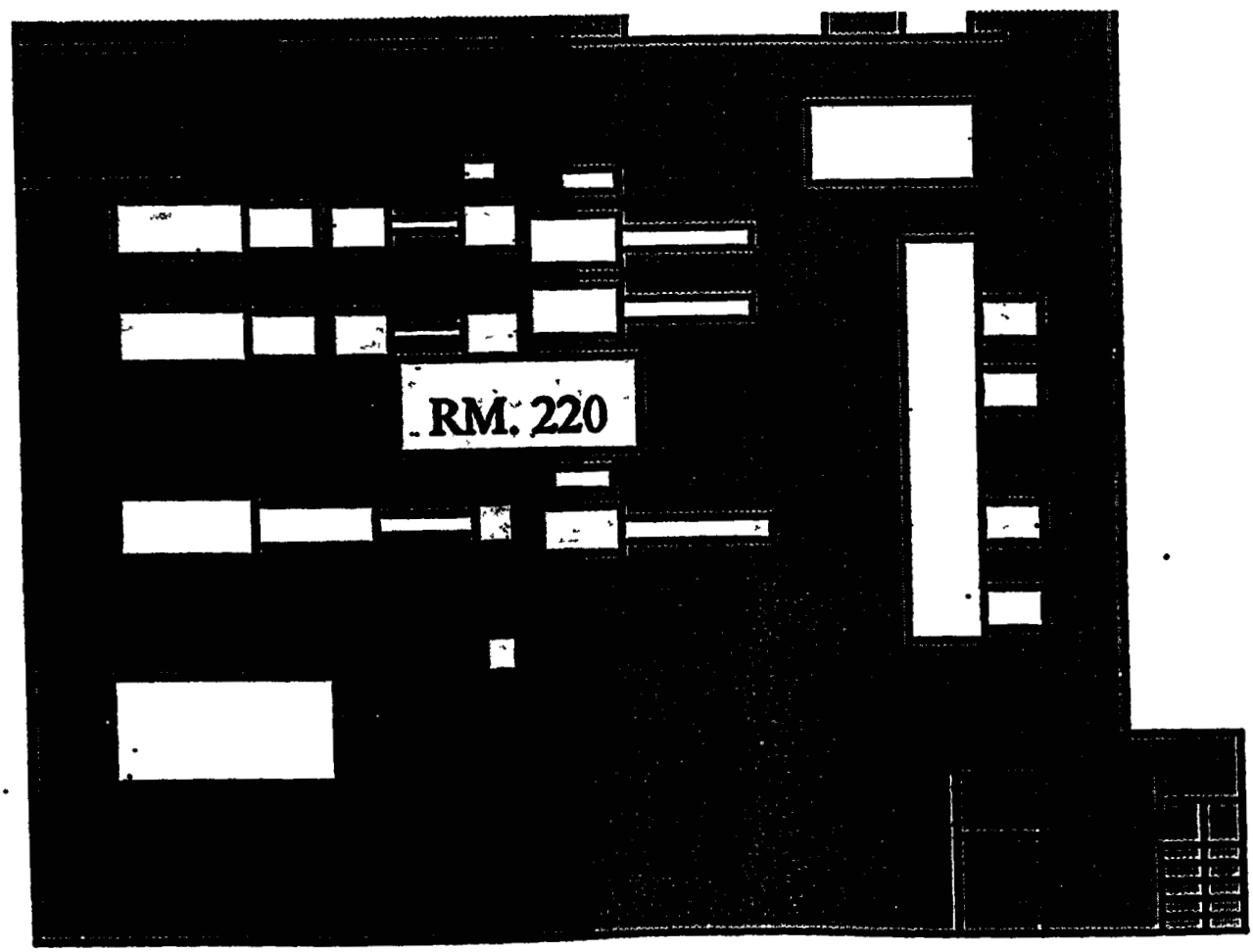
RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		**Building** 707	
Survey Area: J		**Survey Unit** N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area J	Survey Unit N/A	Area (m^2) 640
Survey Unit Description South West corner of room 220, 2nd floor of Building 707 Area is South of Column K-14 and West of Column G-15 Building 707 radiological areas are posted as fixed contamination areas		

Survey Type			Classification		
RLC Survey X FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit.	Area (m^2)	
Survey Unit Description		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building.	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

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SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: J	**Survey Unit.** N/A

Survey Unit Description: SOUTH WEST CORNER OF ROOM 220, 2ND FLOOR OF BUILDING 707 AREA IS SOUTH OF COLUMN K-14 AND WEST OF COLUMN G-15 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 X

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Contaminants of Concern Plutonium X Uranium X Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A X

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

Survey Package Closure:

[redacted]

diological Engineer Signature	Date
	N/A
nager Signature	Date
nager Signature	Date

203/466

220

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building.** 707
Survey Area: J	**Survey Unit** N/A
Survey Unit Description· South West corner of room 220, 2nd floor of Building 707 Area is South of Column K-14 and West of Column G-15 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area **25** biased survey points at the following locations - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, cathene system, etc - Point near each airlock to the plenums - Near waste drum storage - Rooms 221, 222, 223, and maintenance cage area - Stained/discolored areas - Other areas of potential concern based on RCT judgement/experience **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Fixed equipment in maintenance cage - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

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221

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building:** 707
Survey Area: J	**Survey Unit** N/A
Survey Unit Description: South West corner of room 220, 2nd floor of Building 707 Area is South of Column K-14 and West of Column G-15 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

205/466

222

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: J	**Survey Unit** N/A

Survey Unit Description: South West corner of room 220, 2nd floor of Building 707 Area is South of Column K-14 and West of Column G-15 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2. The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3 Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4. Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building.** 707
Survey Area: J	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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224

SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: J	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey **X** Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]		[redacted]	[redacted]
		Project RE Signature	Date
		RESS Manager Signature	Date

[redacted]99

208/466

225

[redacted] VENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg _____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg._____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg._____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg._____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments: _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed:_____ **RS Supervision:** _____ / _____ / _____
Print Name Signature Emp #

209 / 466

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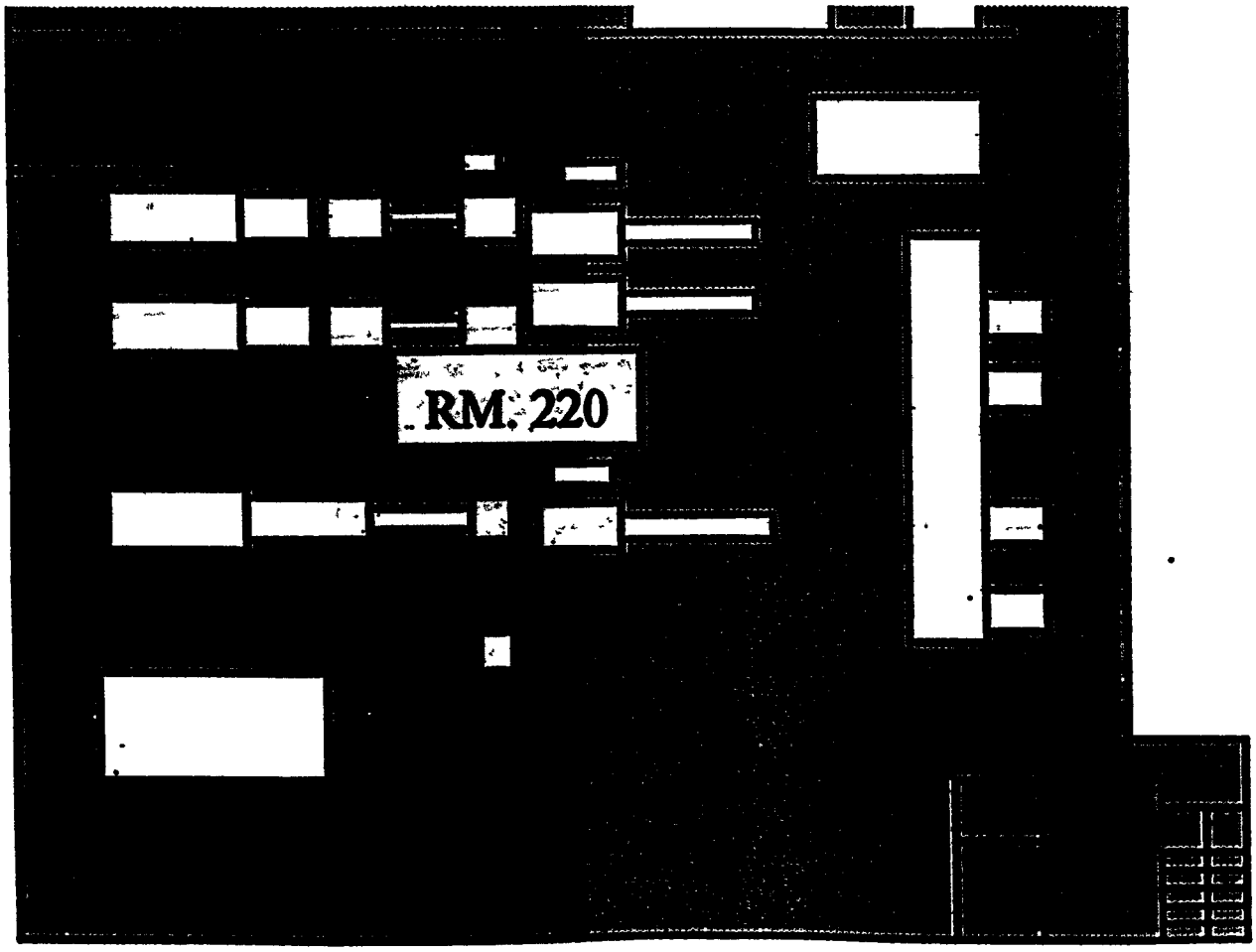
RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		Building 707	
Survey Area: K		Survey Unit N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area K	Survey Unit N/A	Area (m^2) 523

Survey Unit Description Northern portion of room 240, 2nd floor of Building 707 Area is North of Columns M-3, N-3, O-3, P-3

Survey Type	Classification
RLC Survey X FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans
30	55	45	0	0	55

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description·		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type.	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building·	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type	Classification
RLC Survey ☐ FSS ☐	Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐

Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building.** 707
Survey Area: K	**Survey Unit.** N/A

Survey Unit Description: NORTHERN PORTION OF ROOM 240, 2ND FLOOR OF BUILDING 707 AREA IS NORTH OF COLUMNS M-3, N-3, O-3, P-3 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey **X** Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 **X**

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown **X**

Contaminants of Concern Plutonium **X** Uranium **X** Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A **X**

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

Survey Package Closure:

[redacted]

		SS Radiological Engineer Signature	Date
		/A	N/A
		FS Manager Signature	Date
RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: K	**Survey Unit** N/A
Survey Unit Description: Northern portion of room 240, 2nd floor of Building 707 Area is North of Columns M-3, N-3, O-3, P-3 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters:** **30** unbiased survey points uniformly distributed throughout the area. **25** biased survey points at the following locations - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, etc - Point near each airlock to the plenums - Near waste drum storage - Other areas of potential concern based on RCT judgement/experience **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: K	**Survey Unit** N/A

Survey Unit Description: Northern portion of room 240, 2nd floor of Building 707 Area is North of Columns M-3, N-3, O-3, P-3 Building 707 radiological areas are posted as fixed contamination areas

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area· K	**Survey Unit** N/A
Survey Unit Description: Northern portion of room 240, 2nd floor of Building 707 Area is North of Columns M-3, N-3, O-3, P-3 Building 707 radiological areas are posted as fixed contamination areas	

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3· Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4· Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building** 707
Survey Area: K	**Survey Unit:** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: K	**Survey Unit:** N/A
Survey Type: Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]

RCT Supervisor Signature	Date
Project RE Signature	Date
RESS Manager Signature	Date

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[redacted] ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg._____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp. #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments: _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9.					34				
10					35				
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18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed:_____ RS Supervision:_____ / _____ / _____
Print Name Signature Emp #

218 /466

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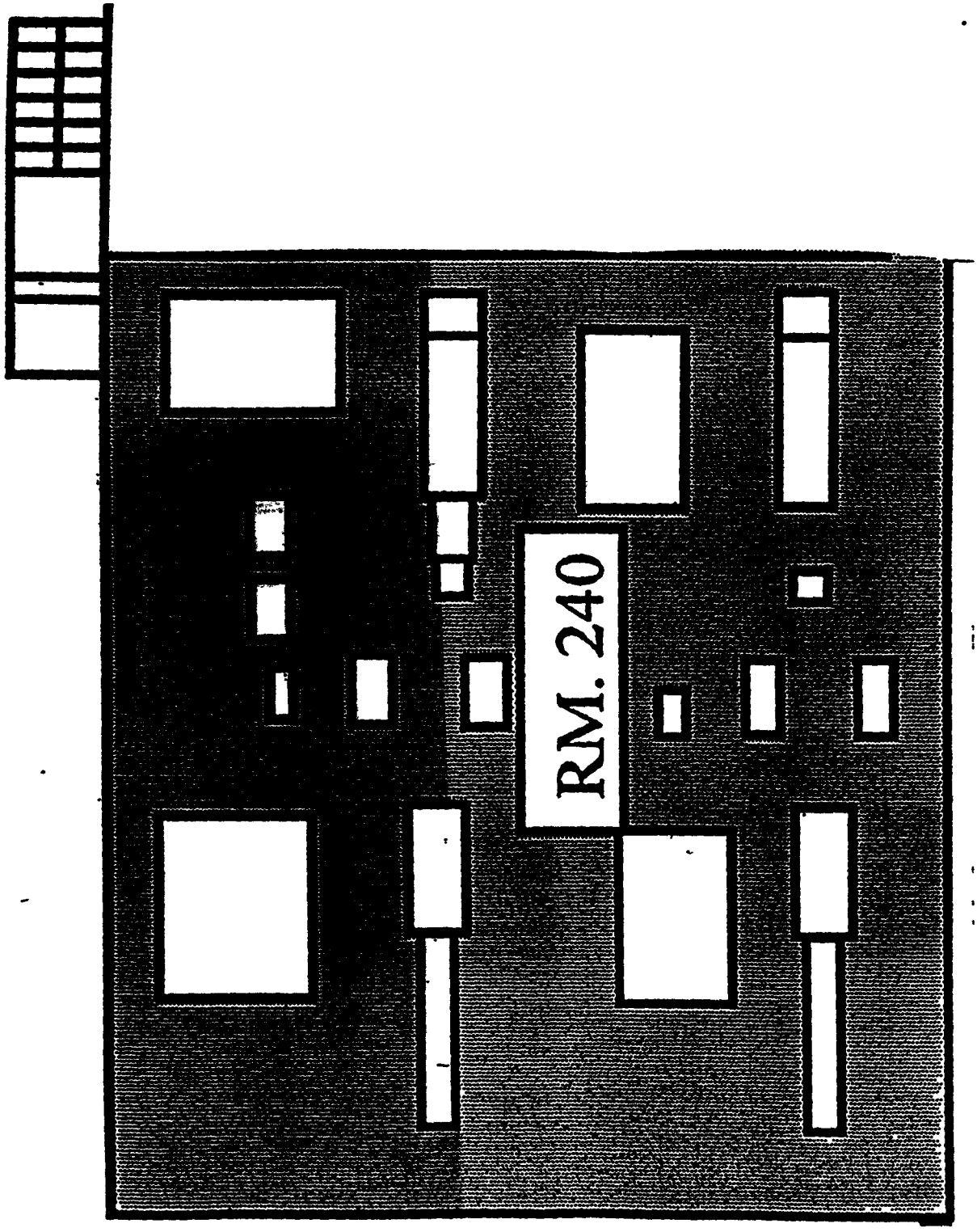
RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID· 99-0002		Building 707	
Survey Area: L		Survey Unit N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

Rev 9/99

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INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area L	Survey Unit N/A	Area (m^2) 627

Survey Unit Description Southern portion of room 240, 2nd floor of Building 707 Area is South of Columns M-3, N-3, O-3, P-3 Building 707 radiological areas are posted as fixed contamination areas

Survey Type			Classification		
RLC Survey X FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**
30	55	45	0	0	55

Building.	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description·		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building:	Type.	Survey Area.
Survey Unit	Area (m^2)	
Survey Unit Description·		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type			Classification		
RLC Survey ☐ FSS ☐			Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	**Biased Surface Activity Measurements**	**Equipment Surface Activity Measurements**	**Media Samples**	**Volumetric Samples**	**Surface Activity Scans**

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: L	**Survey Unit** N/A

Survey Unit Description: SOUTHERN PORTION OF ROOM 240, 2ND FLOOR OF BUILDING 707 AREA IS SOUTH OF COLUMNS M-3, N-3, O-3, P-3 BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 X

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Contaminants of Concern Plutonium X Uranium X Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads Special security requirements for access to 2nd floor

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A X

Labeling Requirements: NONE

Survey Package Implementation:

JAMES S JARVIS	[redacted]	11/5/99
Radiological Engineer Printed Name	Radiological Engineer Signature	Date
NOT APPLICABLE	N/A	N/A
REFS Manager Printed Name	REFS Manager Signature	Date
H B ESTABROOKS		11/5/99
RESS Manager Printed Name	RESS Manager Signature	Date

Survey Package Closure:

JAMES S JARVIS	[redacted]	
RESS Radiological Engineer Printed Name	RESS Radiological Engineer Signature	Date
NOT APPLICABLE	N/A	N/A
REFS Manager Printed Name	REFS Manager Signature	Date
H B ESTABROOKS		
RESS Manager Printed Name	RESS Manager Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: L	**Survey Unit** N/A
Survey Unit Description: Southern portion of room 240, 2nd floor of Building 707 Area is South of Columns M-3, N-3, O-3, P-3 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **30** unbiased survey points uniformly distributed throughout the area. **25** biased survey points at the following locations - Points around floors adjacent to internally contaminated equipment (where accessible) such as glycol P-traps (plenums), hydraulic pumps, etc - Point near each airlock to the plenums - Near waste drum storage - Other areas of potential concern based on RCT judgement/experience **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling when possible) with focus on following areas - Walls behind process lines - Tops/sides of plenums - Stained or discolored areas - Areas around pipe or other penetrations **EQUIPMENT** **45** biased survey points on equipment with one or more samples from - Equipment which has visible leaks or contained spills beneath them - Survey points at exhaust ducts - 5 survey points on top of overhead piping (where locations are accessible) - Other areas of potential concern based on RCT judgement/experience	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area. L	**Survey Unit.** N/A
Survey Unit Description. Southern portion of room 240, 2nd floor of Building 707 Area is South of Columns M-3, N-3, O-3, P-3 Building 707 radiological areas are posted as fixed contamination areas	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 55 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations found above the DCGL shall be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	NONE (2nd Floor of 707 does not have painted floors)	
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: L	**Survey Unit·** N/A

Survey Unit Description: Southern portion of room 240, 2nd floor of Building 707 Area is South of Columns M-3, N-3, O-3, P-3 Building 707 radiological areas are posted as fixed contamination areas

Survey/Sampling Instructions

NOTE 1 Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2 The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3: Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4 Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building.** 707
Survey Area: L	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: L	**Survey Unit** N/A
Survey Type: Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]		RCT Supervisor Signature	Date
		Project RE Signature	Date
		RESS Manager Signature	Date

[redacted] ENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg. _____	Bkg. _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg. _____	Bkg _____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type: _____
Building _____
Location _____
Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp. #

RCT _____ / _____ / _____
Print name Signature Emp. #

PRL # : _____

Comments: _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1.					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13.					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
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21					46				
22					47				
23					48				
24					49				
25					50				

Date Reviewed: _____ RS Supervision: _____ / _____ / _____
Print Name Signature Emp #

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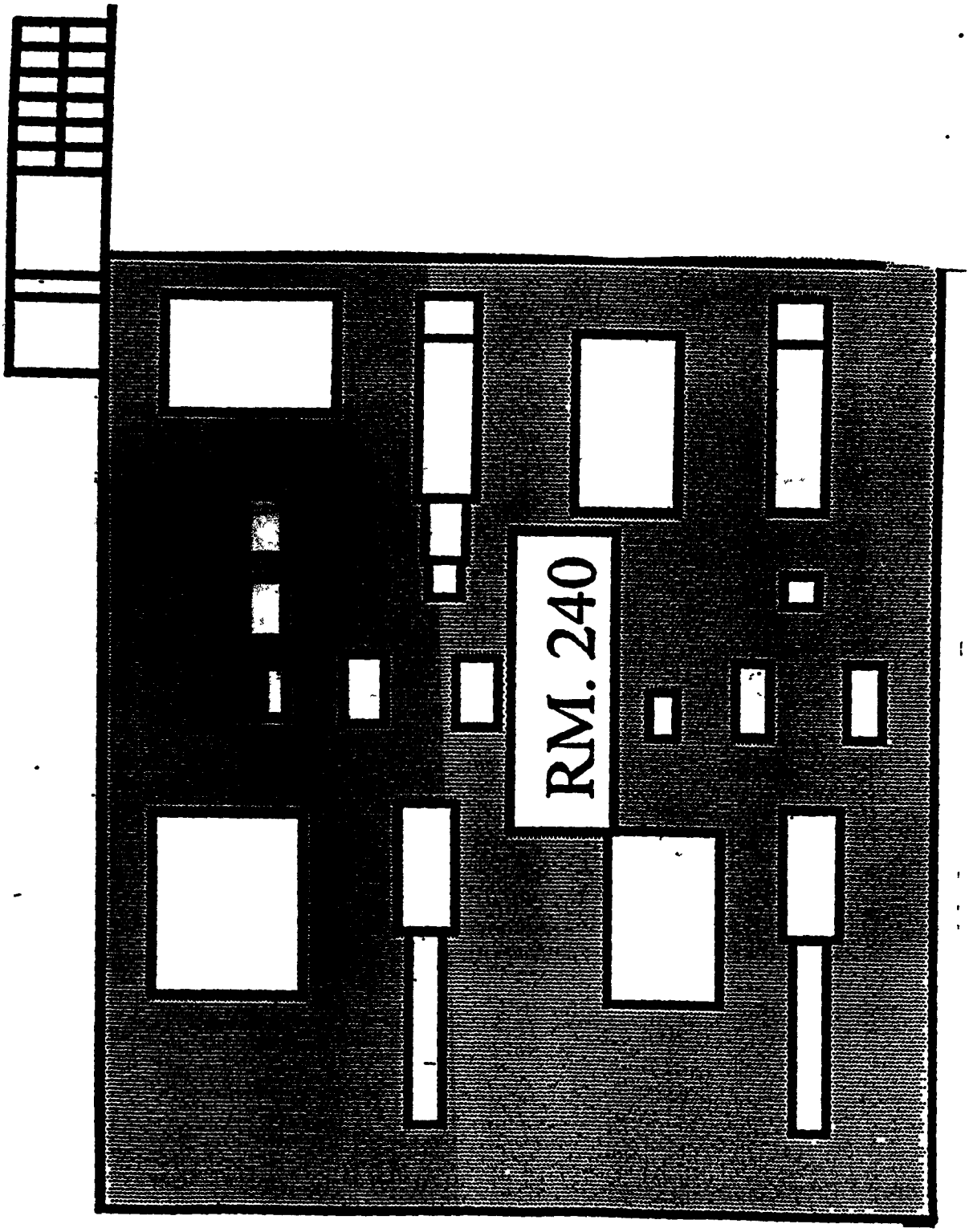
RADIOLOGICAL SAFETY

Drawing Showing Survey Points



SURVEY PACKAGE TRACKING FORM

Package ID: 99-0002		**Building** 707	
Survey Area. M		**Survey Unit** N/A	
Initiator/ Date	**Release Date**	**Validation Date**	**Closure Date**
10/25/99			

INITIAL SURVEY PACKAGE DESIGN FORM

Package ID 99-0002	Building 707	Type 3
Survey Area M	Survey Unit. N/A	Area (m^2) 634

Survey Unit Description INSIDE OF MODULE A (ROOM 100) EXCLUDING ISOPRESS ROOM Building 707 radiological areas are posted as fixed contamination areas

Survey Type. RLC Survey X FSS ☐			Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X		
Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans
45	47	40	4	0	62

Building.	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type RLC Survey ☐ FSS ☐			Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit.	Area (m^2)	
Survey Unit Description		

Survey Type. RLC Survey ☐ FSS ☐			Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

Building	Type	Survey Area
Survey Unit	Area (m^2)	
Survey Unit Description		

Survey Type RLC Survey ☐ FSS ☐			Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown ☐		
Random/Uniform Surface Activity Measurements	Biased Surface Activity Measurements	Equipment Surface Activity Measurements	Media Samples	Volumetric Samples	Surface Activity Scans

SURVEY PACKAGE COVER SHEET

Package ID: 99-0002	**Building:** 707
Survey Area: M	**Survey Unit:** N/A

Survey Unit Description: Inside of Module A (Room 100) excluding isopress room BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Building Information:

Survey Type Reconnaissance Level Characterization Survey X Final Status Survey ☐

Building Type Type 1 ☐ Type 2 ☐ Type 3 X

Classification Class 1 ☐ Class 2 ☐ Class 3 ☐ Unknown X

Contaminants of Concern Plutonium X Uranium X Other ☐ _____

Justification for Classification: N/A

Special Support Requirements: Ladder, manlift, scaffolding, and/or remote reach tools and instrumentation may be required for access into overhead areas – use caution in overheads

Special Safety Precautions: Access to overhead areas may require additional controls Review RWP requirements and surveys prior to entry Use caution when working in overheads

Isolation Controls:

Level 1 ☐ Level 2 ☐ N/A X

Labeling Requirements: NONE

Survey Package Implementation:

[redacted]

[redacted]			
		Radiological Engineer Signature	Date
		A	N/A
		Manager Signature	Date
RESS Manager Printed Name	Employee #	RESS Manager Signature	Date

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM

Package ID: 99-0002	**Building** 707
Survey Area: M	**Survey Unit** N/A
Survey Unit Description: INSIDE OF MODULE A (ROOM 100) EXCLUDING ISOPRESS ROOM BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Activity Measurements	**FLOORS/WALLS < 2 meters** **45** unbiased survey points uniformly distributed throughout room **17** biased survey points at the following locations - 3 points adjacent to each stokes pump - 3 points around floor near GB A-15 - 2 points near c-cell 530 - 2 points near criticality drain locations - 2 points near entrance to isopress room - 2 points near Soft Sided Containment near GB A-20/A-30 **CEILINGS/WALLS > 2 meters** **30** biased surveys (divided evenly between wall and ceiling where possible) with focus on following areas - Walls behind process lines - Ceilings above GB's - Ceilings/walls adjacent to c-cells/tents - Stained or discolored areas - Walls/ceilings near GB's mounted high on walls - Areas around pipe or other penetrations **EQUIPMENT** **40** biased survey points on equipment with one or more samples from - Each GB "section" extending from the main (center) GB line - Equipment in the vicinity of the stokes pumps - Gloveboxes which have visible leaks or contained spills beneath them - 2 surveys at 2 different room exhaust ducts - Bag-in/bag out ports to GB lines - 5 survey points on top of overhead piping (where locations are accessible through	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**

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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: M	**Survey Unit** N/A
Survey Unit Description: INSIDE OF MODULE A (ROOM 100) EXCLUDING ISOPRESS ROOM BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS	

Minimum Survey/Sampling Measurement Requirements

Measurement	Number and Type	Comments
Surface Scanning	**FLOORS/WALLS < 2 meters** 62 1 m^2 surface scans shall be taken at each location identified for surface activity measurements Locations above the DCGL are to be documented **CEILINGS/WALLS > 2 meters** NONE **EQUIPMENT** NONE	**SEE NOTE 1** **SEE NOTE 2** **SEE NOTE 3** **SEE NOTE 4**
Media Samples	Total of 4 biased (paint) media samples taken as follows - 1 sample near one of the entrances to the module - 1 sample near the HCA around one of the stokes pumps - 1 sample beneath GB A-15 (EU decon GB) - 1 sample near a criticality drain	**SEE NOTE 5**
Volumetric Samples	NONE	
Isotopic Gamma Scans	NONE	

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTIONS FORM (cont)

Package ID: 99-0002	**Building** 707
Survey Area: M	**Survey Unit.** N/A

Survey Unit Description: INSIDE OF MODULE A (ROOM 100) EXCLUDING ISOPRESS ROOM BUILDING 707 RADIOLOGICAL AREAS ARE POSTED AS FIXED CONTAMINATION AREAS

Survey/Sampling Instructions

NOTE 1: Representative surveys of the area will be taken in accordance with 3-PRO-165-RSP-07 02, "Contamination Monitoring Requirements", for the following

- Direct alpha contamination
- Direct beta contamination
- Removable alpha contamination
- Removable beta contamination
- $1m^2$ scan measurements for alpha then beta/gamma contamination

NOTE 2: The RCT shall document the locations of all surveys performed and maintain with the survey instructions package

NOTE 3: Areas which are posted/considered High Contamination Areas (HCA's) or Airborne Radioactivity Areas (ARA's) do not require Reconnaissance Level Characterization (RLC) surveys and may be skipped

NOTE 4: Surveys in these areas may be difficult to obtain due to height and/or access limitations RCT's shall utilize best judgement as to safely accessing these areas Survey those areas that are readily accessible through reach tools, ladders, scaffolding and/or lift systems and where proper training has been received

NOTE 5 For <u>each</u> media sample location, perform the following in accordance with PRO-477-RSP-16 03, "Radiological Samples of Building Media "

- RCT - verify that the media sampling location is free of removable surface activity prior to media sampling If the surface contains removable contamination, then the surface shall be decontaminated prior to collecing the media sample
- RCT - perform and document a survey for direct contamination (alpha then beta) and removable contamination (alpha then beta) in accordance with 3-PRO-165-RSP-07 02, *Contamination Monitoring Requirements,* <u>prior to media sampling</u>
- Media Sampler – using an appropriate tool, remove the surface material to a depth sufficient to expose the base material over the entire sample area
- Media Sampler - Media sample area shall be as large as the NE Electra (standard radiation detection instrument) probe area The area of the media shall be documented at time of collection
- Media Sampler – Sample weight of media samples shall be determined prior to analysis Disposition the sample in accordance with approved procedures
- Media Sampler – media samples shall include analysis for Pu-239, Am-241, U-234, U-235, and U-238
- <u>Following each media sample</u>, the RCT shall perform and document a survey for direct contamination (alpha then beta) and removable contamination (alpha then beta) in accordance with 3-PRO-165-RSP-07 02, *Contamination Monitoring Requirements*

SURVEY PACKAGE CORRECTION/CHANGE HISTORY FORM

Package ID: 99-0002	**Building** 707
Survey Area: M	**Survey Unit** N/A

Change #	Description	Initiator/ Date	PRE

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SURVEY PACKAGE VALIDATION CHECKLIST FORM

Package ID: 99-0002	**Building** 707
Survey Area: M	**Survey Unit:** N/A
Survey Type: Reconnaissance Level Characterization Survey X Final Status Survey ☐	

All Documentation Reviewed for Completion	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

All Surveys and Samples Accounted For	**RCT Supervisor**	**PRE**
Scan Surveys		
Total Activity Surveys		
Exposure Rate Surveys		
Removable Surveys		
Media Samples		
Volumetric Samples		

Comments

[redacted]			
		RCT Supervisor Signature	Date
		Project RE Signature	Date
		RESS Manager Signature	Date

INSTRUMENT DATA

Mfg._____	Mfg._____	Mfg._____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg._____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____
Mfg _____	Mfg _____	Mfg _____
Model _____	Model _____	Model _____
Serial # _____	Serial # _____	Serial # _____
Cal Due _____	Cal Due _____	Cal Due _____
Bkg _____	Bkg._____	Bkg._____
Efficiency _____	Efficiency _____	Efficiency _____
MDA _____	MDA _____	MDA _____

Survey Type:_____

Building _____

Location _____

Purpose _____

RWP # _____

Date _____ Time _____

RCT _____ / _____ / _____
Print name Signature Emp #

RCT _____ / _____ / _____
Print name Signature Emp #

PRL # : _____

Comments _____

SURVEY RESULTS

	REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²		REMOVABLE Alpha DPM/100 cm²	REMOVABLE Beta DPM/100 cm²	DIRECT Alpha DPM/100 cm²	DIRECT Beta DPM/100 cm²
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
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22					47				
23					48				
24					49				
25					50				

Date Reviewed:_____ **RS Supervision:**_____ / _____ / _____
Print Name Signature Emp #

256

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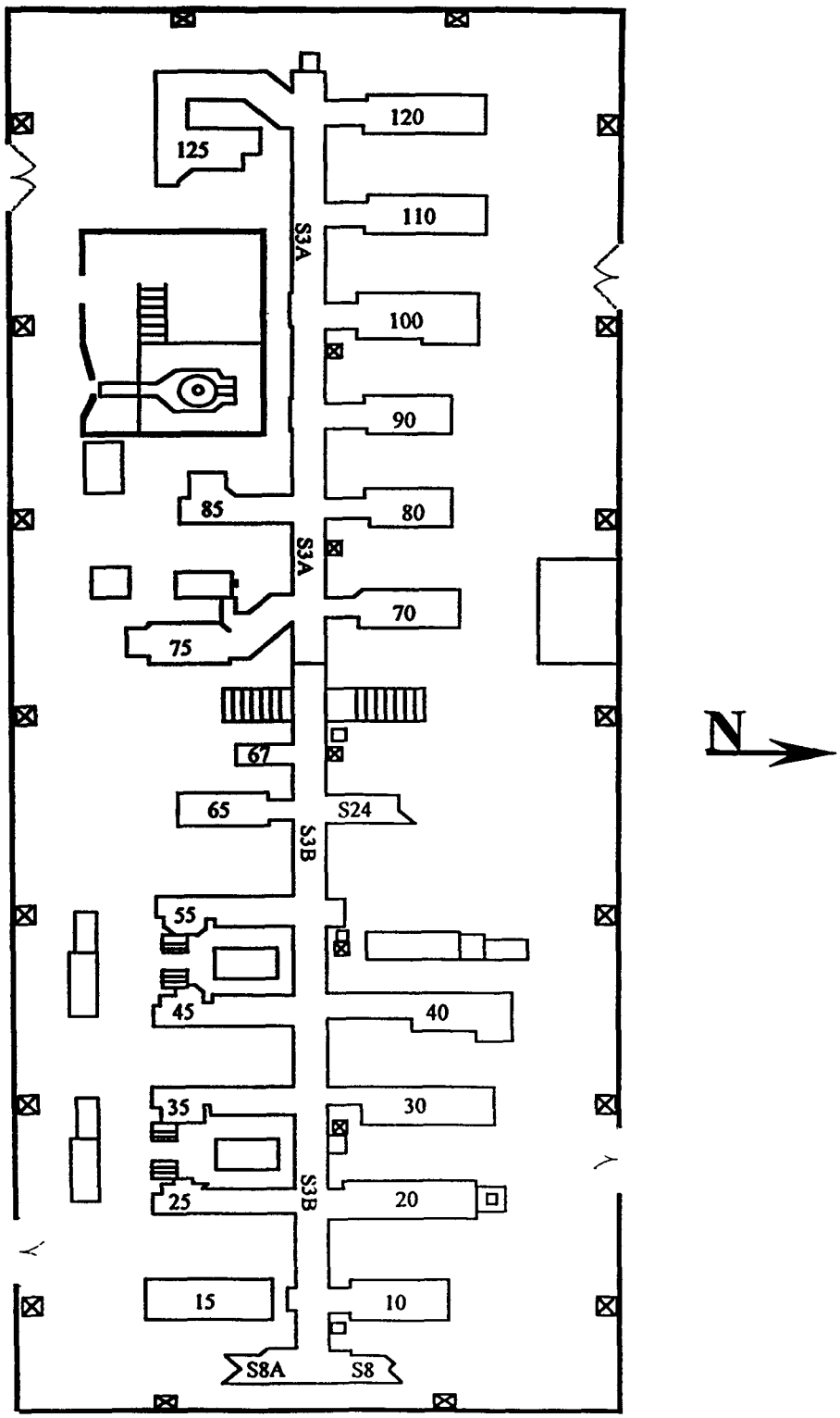
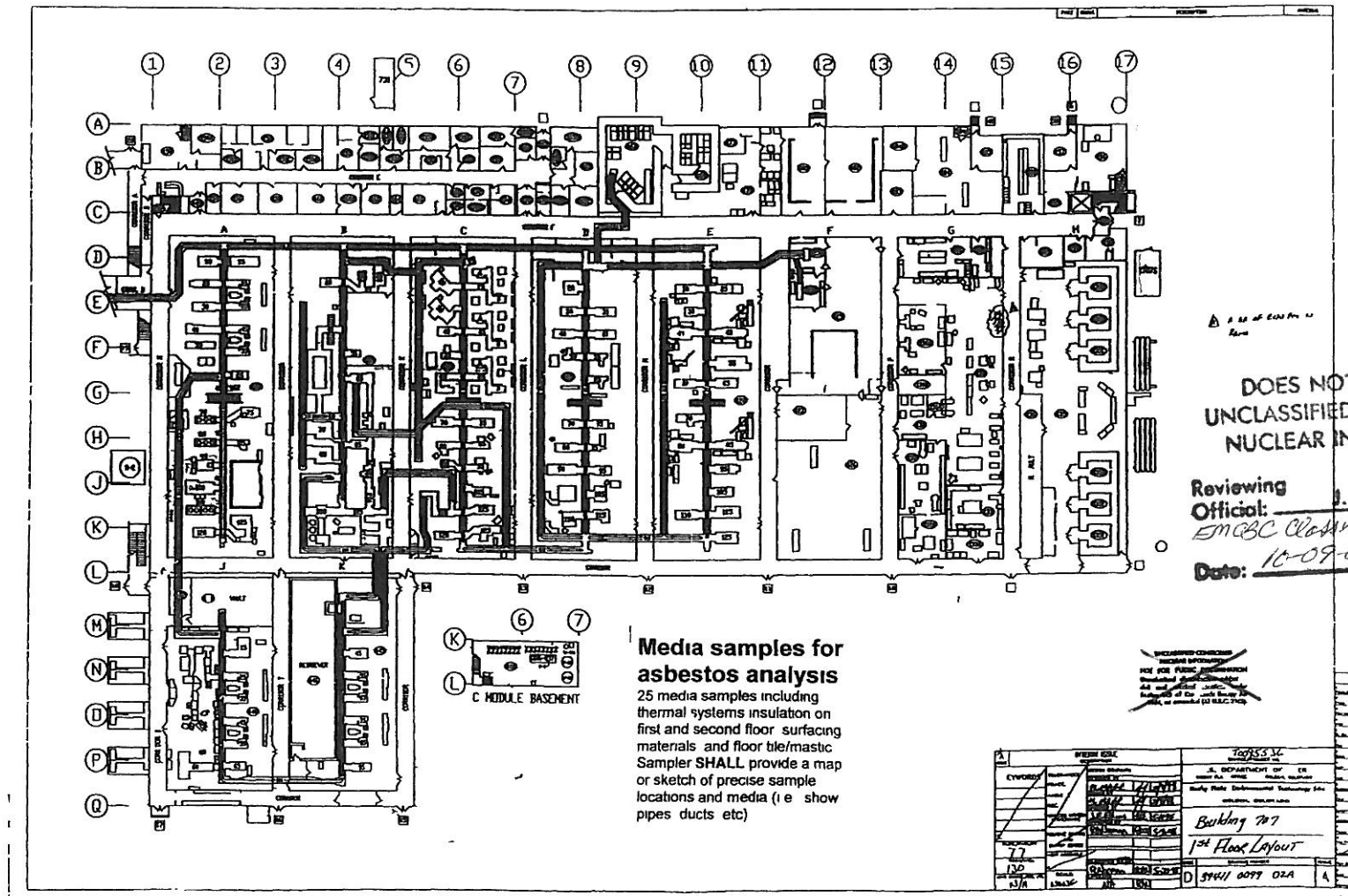
RADIOLOGICAL SAFETY

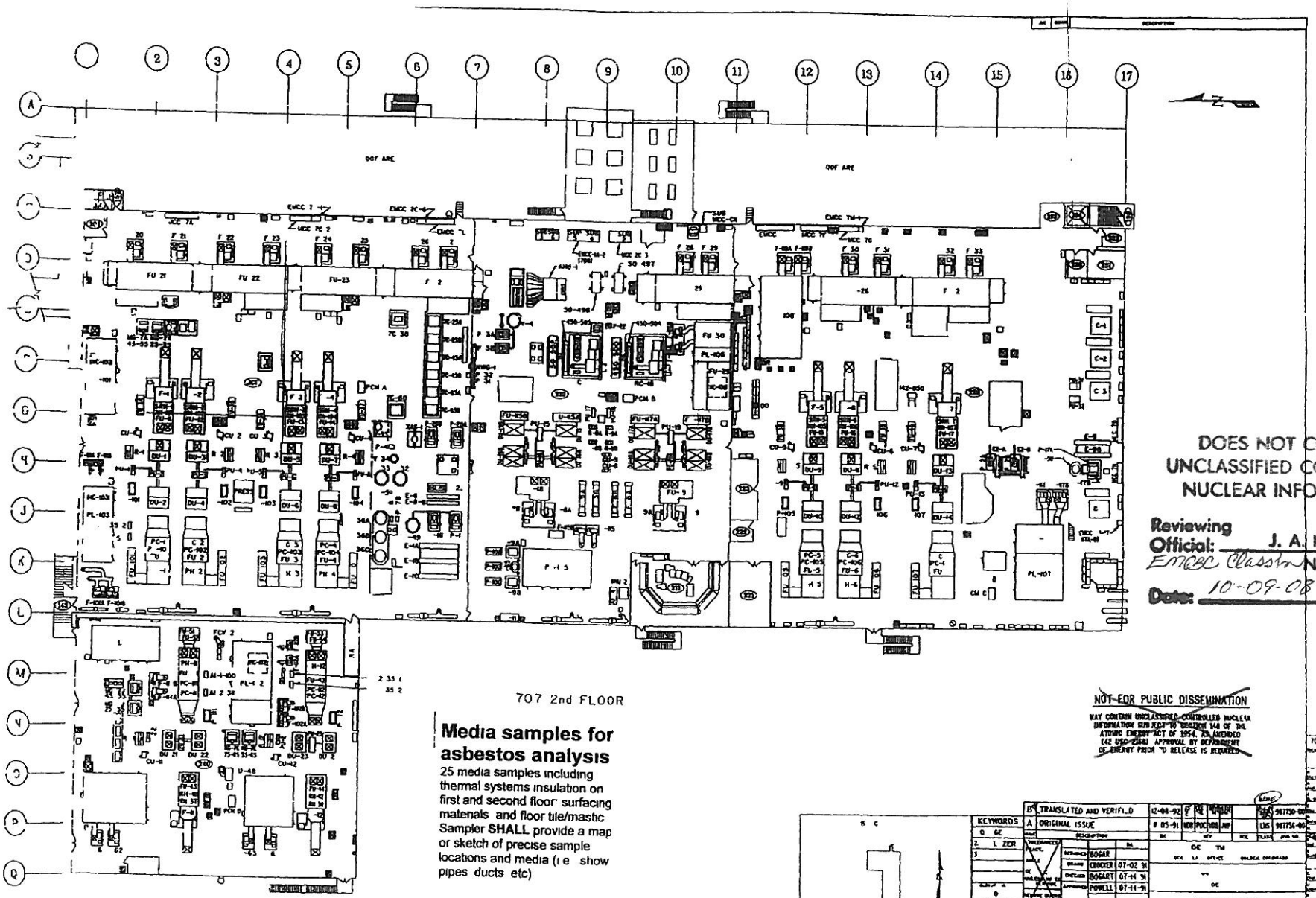
Drawing Showing Survey Points

MODULE A




C MODULE BASEMENT
Media samples for asbestos analysis
25 media samples including thermal systems insulation on first and second floor surfacing materials and floor tile/mastic Sampler SHALL provide a map or sketch of precise sample locations and media (i e show pipes ducts etc)
DOES NOT CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION
Reviewing Official: J. A. NESHEIM
EM CBC Classification Officer
Date: 10-09-08
Building 707
1st Floor Layout
D 59411 0099 02A

21



Media samples for asbestos analysis

25 media samples including thermal systems insulation on first and second floor surfacing matenals and floor tile/mastic Sampler **SHALL** provide a map or sketch of precise sample locations and media (i e show pipes ducts etc)

DOES NOT CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Reviewing Official: J. A. NESHEIM
Name
Date: 10-09-08

NOT FOR PUBLIC DISSEMINATION

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

MASTER DRAWING
MAINTAIN AS BUILT PER DES &
FE GROUP RES ONSIBLE

KEY PLAN

KEYWORDS

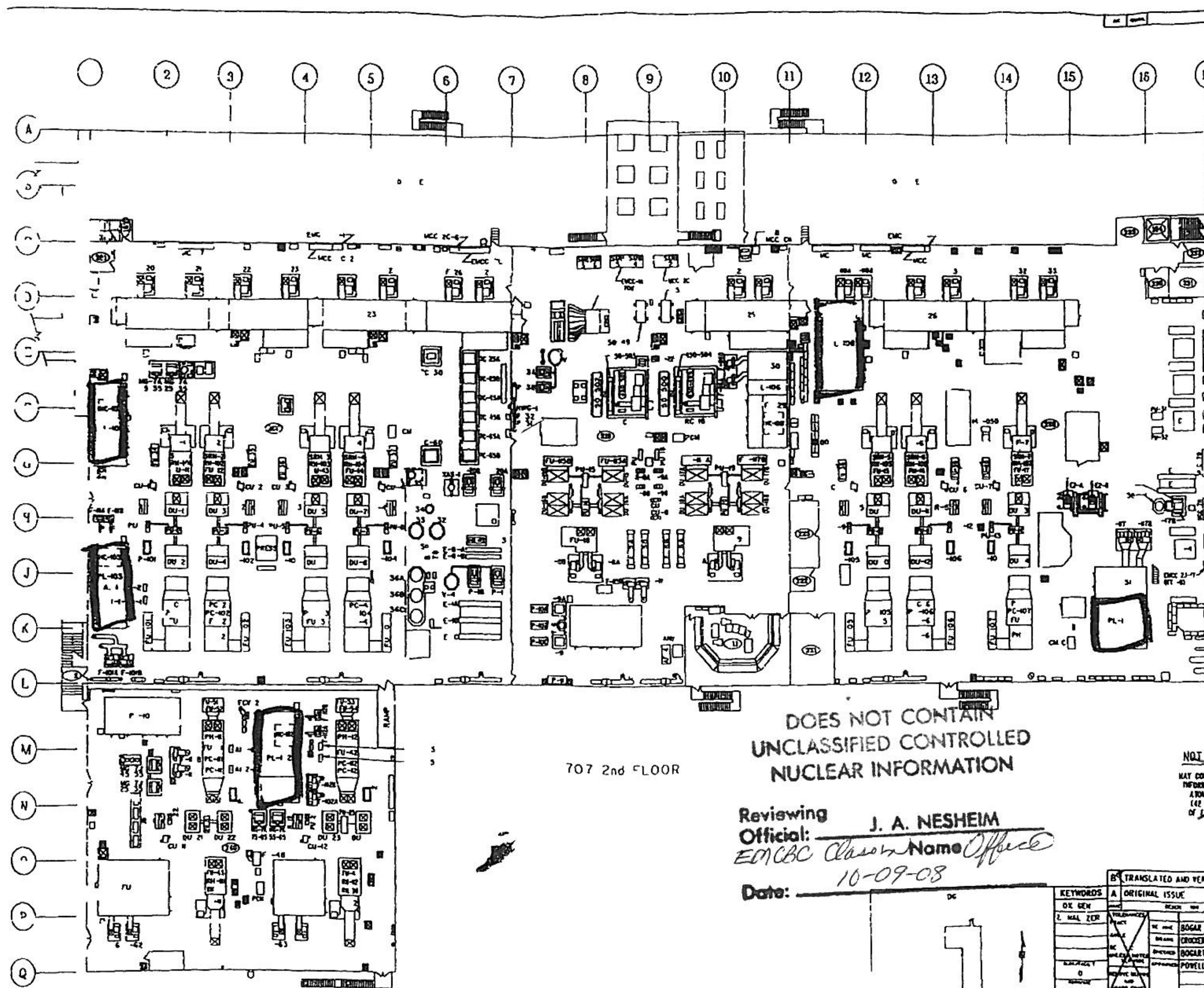
B	TRANSLATED AND VERIFI.D	12-08-92	
A	ORIGINAL ISSUE	8 05-91	

BOGAR
CHECKER 07-02 91
BOGART 07-11 91
POWELL 07-11-91

BLDG 707 2ND FLOOR
OXYGEN ANALYZERS

22

14/466



Beryllium smear sampling

3 smears at widely distributed locations in overhead areas (wall ceiling or other accessible surface above drop ceiling or above 2 meters if no drop ceiling) with precise locations to be determined by accessibility

These should be done concurrent with radiological surveys of same locations to avoid repeated entries into these areas Beryllium smears should be done adjacent to ***but not overlapping with*** radiological smears One duplicate should be collected every 10 samples

2 smears each on or near plenums 101 and 103 Room 200

2 smears each on or near plenums 107 and 108 Room 220

2 smears on or near plenum 102 Room 240

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Reviewing Official: J. A. NESHEIM
Name EMCBC Classification Office
Date: 10-09-08

~~NOT FOR PUBLIC DISSEMINATION~~

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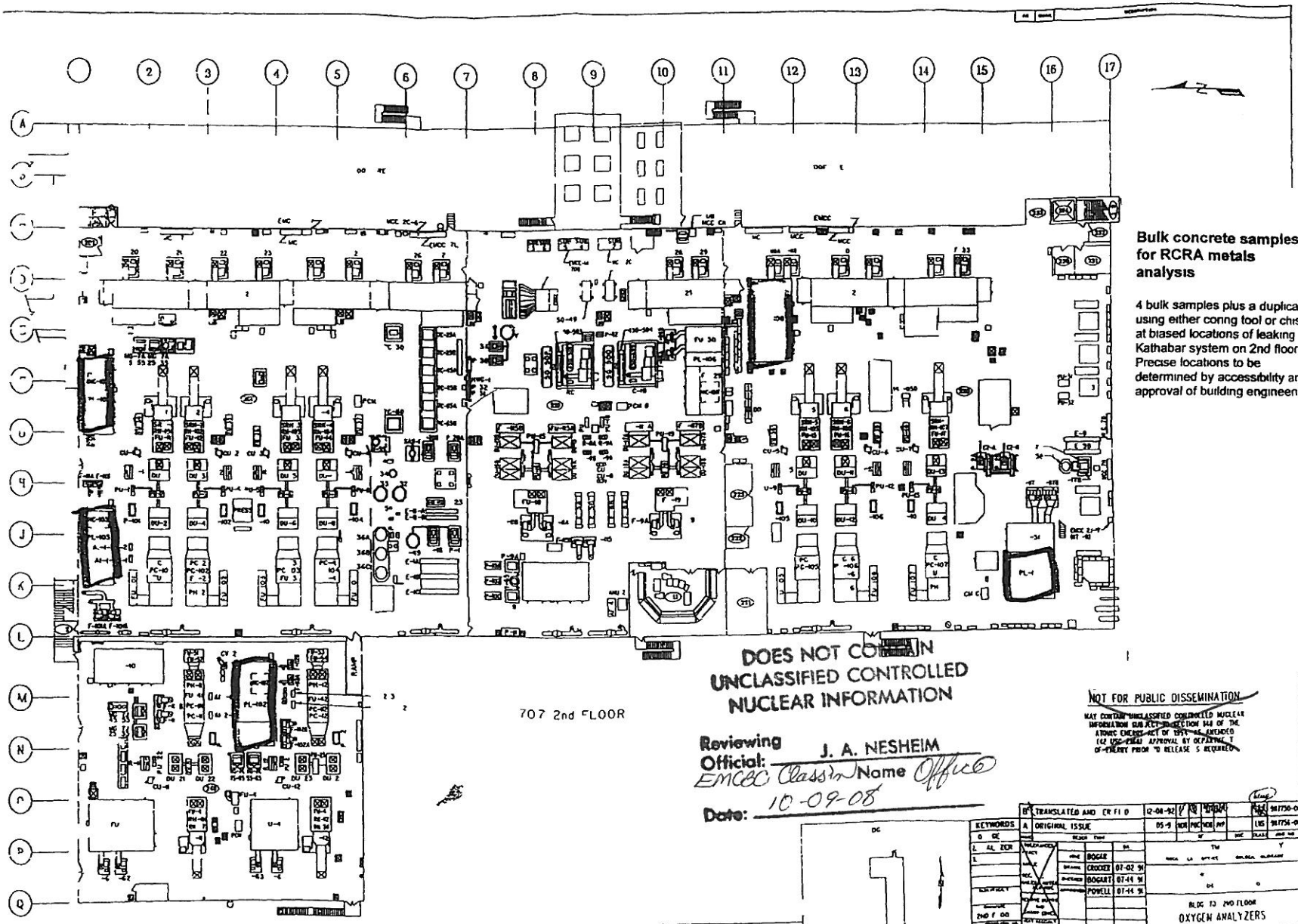
B	TRANSLATED AND VER F D	12 08-92	
A	ORIGINAL ISSUE	05-9	

BOGAR
CROCKER 07-02 91
BOGART 07-14 91
POWELL 07-14 91

BLDG 707 2ND FLOOR

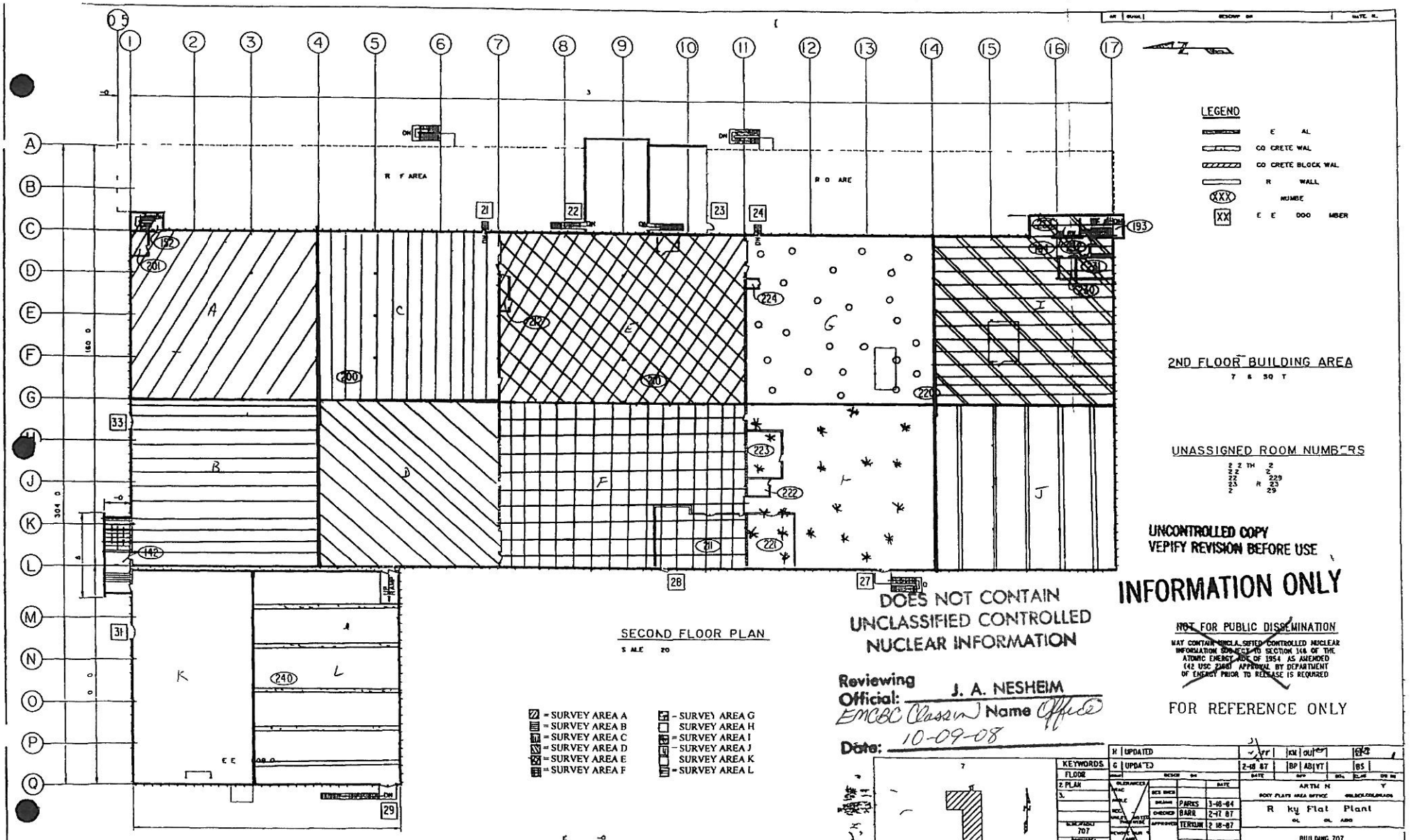
MASTER DRAWING

35'

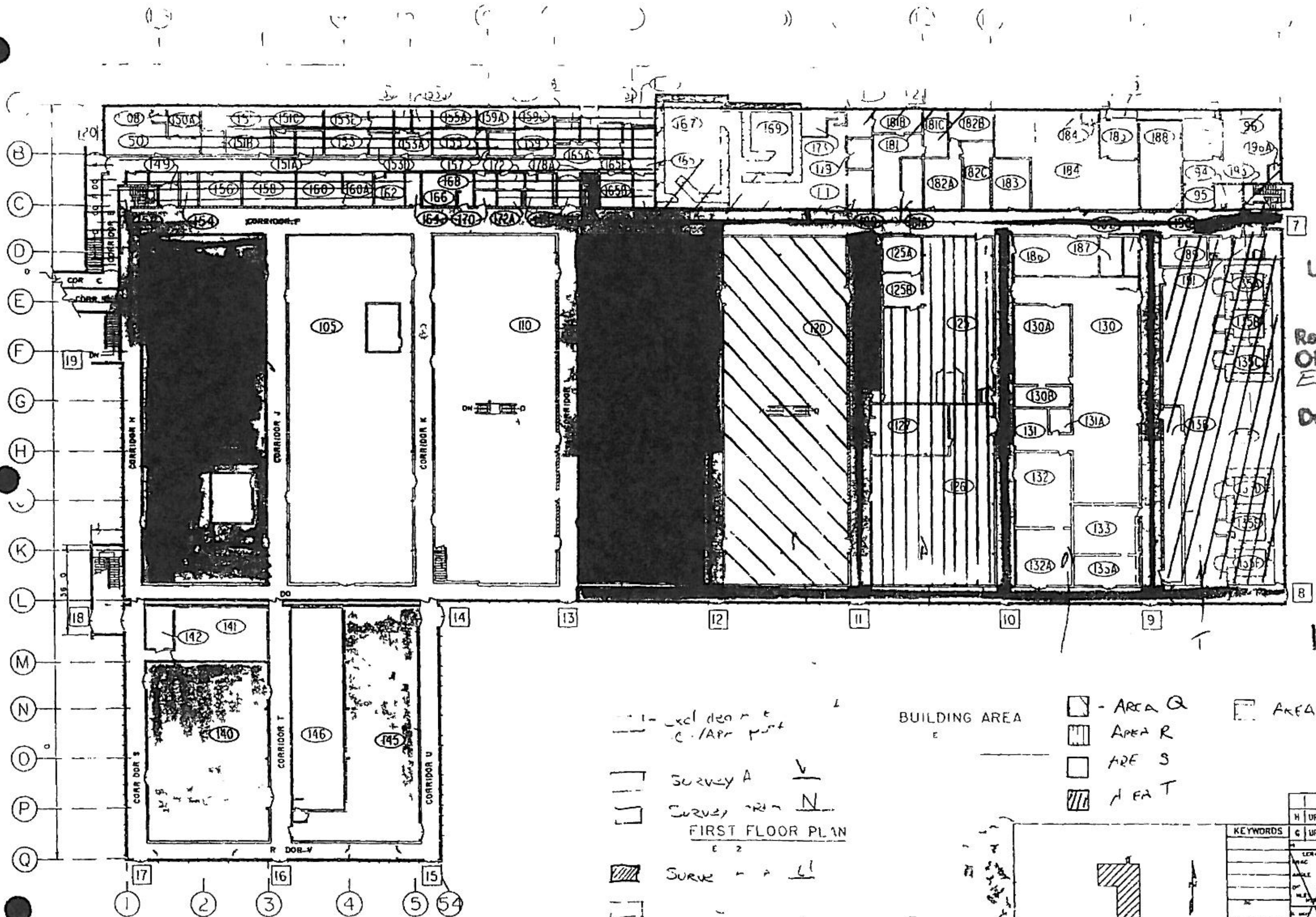


Bulk concrete samples for RCRA metals analysis

4 bulk samples plus a duplicate using either coring tool or chisel at biased locations of leaking Kathabar system on 2nd floor Precise locations to be determined by accessibility and approval of building engineering


LEGEND
CONCRETE WALL
CONCRETE BLOCK WALL
WALL
NUMBER
2ND FLOOR BUILDING AREA
UNASSIGNED ROOM NUMBERS
UNCONTROLLED COPY
VERIFY REVISION BEFORE USE
INFORMATION ONLY
NOT FOR PUBLIC DISSEMINATION
FOR REFERENCE ONLY
SECOND FLOOR PLAN
= SURVEY AREA A
= SURVEY AREA B
= SURVEY AREA C
= SURVEY AREA D
= SURVEY AREA E
= SURVEY AREA F
= SURVEY AREA G
SURVEY AREA H
= SURVEY AREA I
= SURVEY AREA J
SURVEY AREA K
= SURVEY AREA L
DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION
Reviewing Official: J. A. NESHEIM
EM CBC Classifier Name Office
Date: 10-09-08
MASTER DRAWING
AS-BUILT PENDING
KEY PLAN
KEYWORDS
FLOOR
2. PLAN
707
PARKS 3-16-84
BARR 2-17-87
TERRUN 2-18-87
2-18-87
R ky Flat Plant
BUILDING 707
SECOND & TH RD FLOOR PLANS
D 307072-MH

125



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EMCBC Classification Officer
Date: 10-09-08

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FOR REFERENCE ONLY

BUILDING AREA

- AREA Q
AREA R
AREA S
AREA T
AREA Y

Survey Area V
Survey Area N
FIRST FLOOR PLAN

Survey Area U

Survey Area W
Survey Area P

118/446

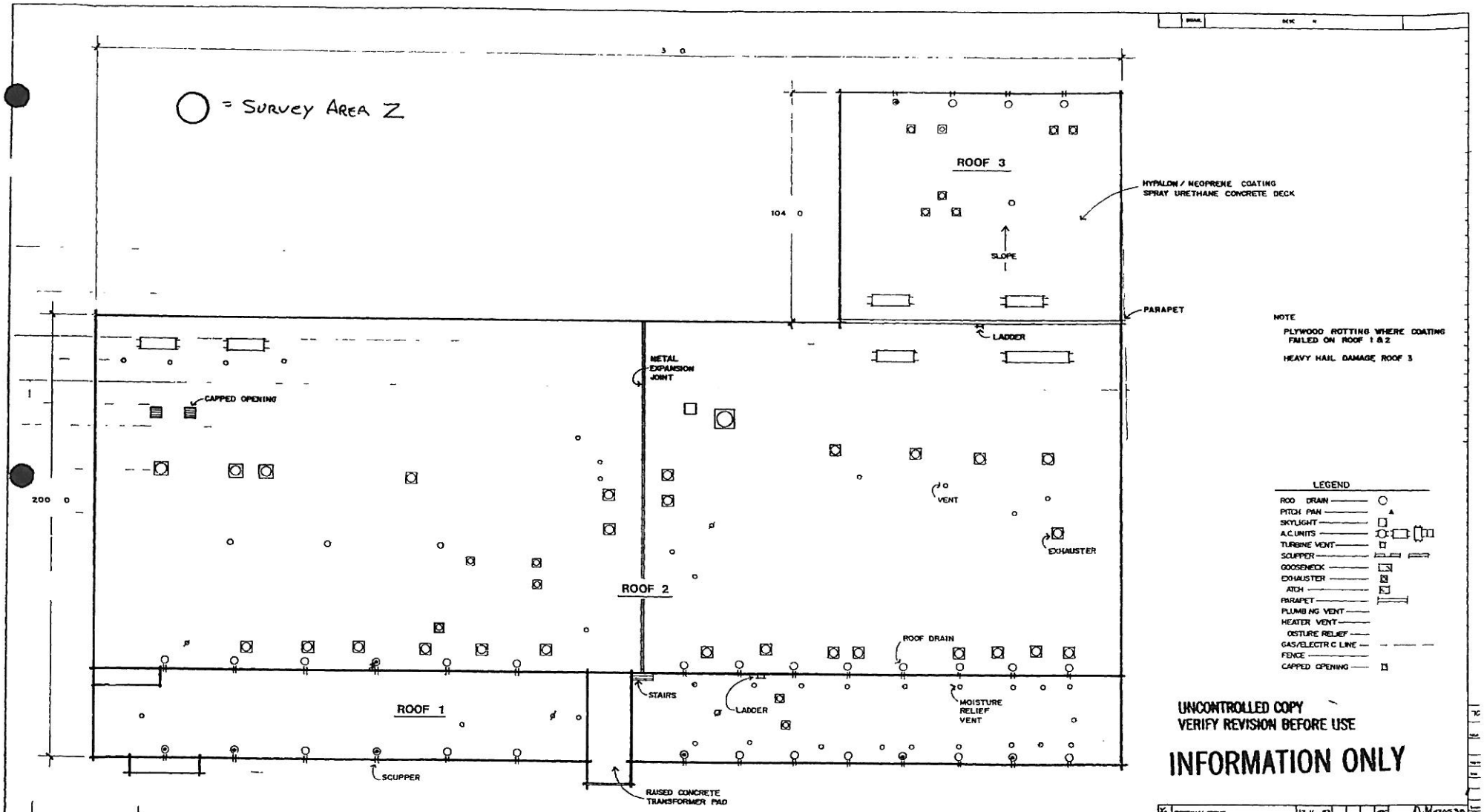
MASTER DRAWING
MAINTAIN AS BUILT PER DES 8- FE GROUP RESPONSIBLE PCSE

KEY PLAN

KEYWORDS	H UPDATED	2 18 87
	G UPDATED	
	PARKR	4 20 84
	BARR	2 17 87
	TERKLA	2 18 87

Rocky Flats Plant
BUILDING 707
FIRST FLOOR PLAN
D 307071M H

176



NOTE

PLYWOOD ROTTING WHERE COATING FAILED ON ROOF 1 & 2

HEAVY HAIL DAMAGE ROOF 3

LEGEND

ROO DRAIN
PITCH PAN
SKYLIGHT
A.C.UNITS
TURBINE VENT
SCUPPER
GOOSENECK
EXHAUSTER
ATCH
PARAPET
PLUMB NG VENT
HEATER VENT
OISTURE RELIEF
GAS/ELECTR C LINE
FENCE
CAPPED OPENING

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707 — MANUFACTURING BLDG

SCALE 1 20 0

MASTER DRAWING
MAINTAIN AS BUILT PER DES 8

ORIGINAL ISSUE 12 14 83

Rocky Flats Plant

ELDG 707
ROOF PLAN

130707

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